CDX-5N65W

SERVICE MANUAL

US Model
Canadian Model

Model Name Using Similar Mechanism	CDX-5N61W
CD Drive Mechanism Type	MG-CDX-20
Optical Device Name	KSM-130A

SPECIFICATIONS

The player

Laser Diode Properties	Material: GaAlAs Wavelength: 780 nm Emission duration: Continuous Laser Output power: Less than 44.6μW* * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.
Frequency response	20 Hz – 20,000 Hz ± 3 dB
Wow and flutter	Below measurable limit

Power section and others

Power requirements and voltage	Car battery, negative ground 13.2 V (10.8 – 15.6 V) DC
Supplied accessories	Disc Magazine (1)

Design and specifications subject to change without notice.

Features

- 740 minutes maximum continuous play with 10 discs
- Remote control operation
- Ability to choose any track from any disc in the disc magazine

使用時は添付資料も参照のこと
Refer to the additional documents.

CD AUTO CHANGER
PART NO. B8182-C9969

COMPACT DISC PLAYER

SONY®

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SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

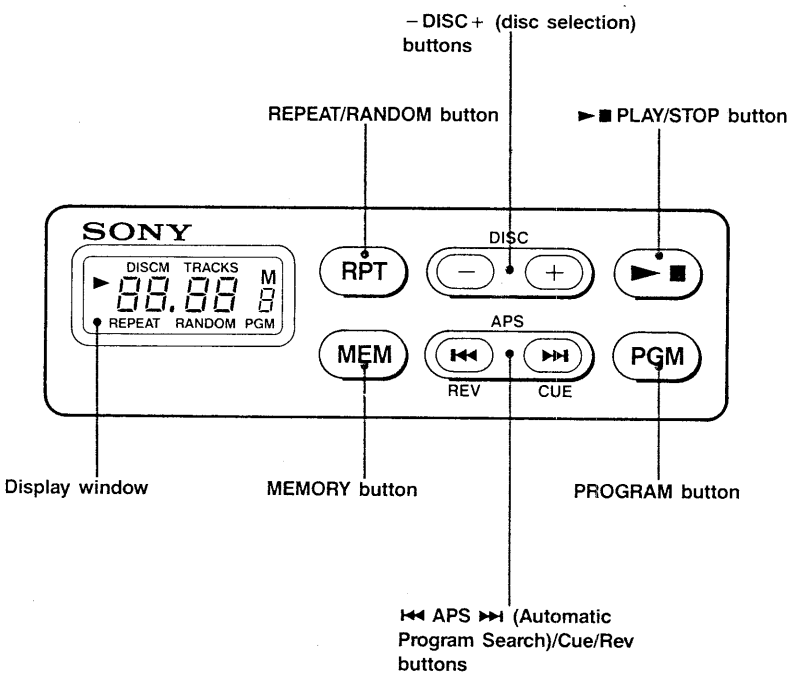
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

Identifying the Parts

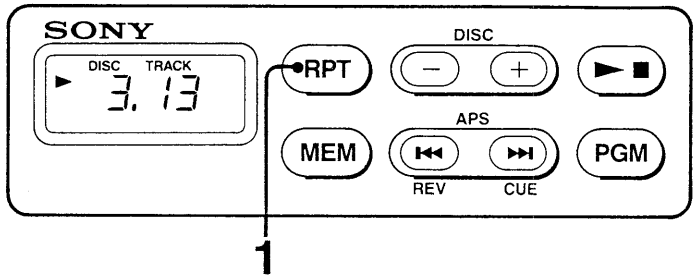


Note

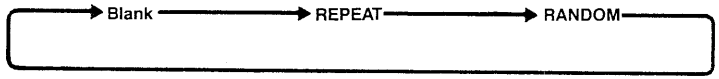
The buttons and display window light up when ignition is on. The display window lights up during play only.

Enjoying the Variety of Playing Modes

Playing Repeatedly — Repeat play

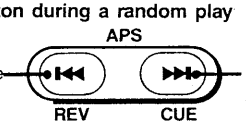


1 Each time RPT button is pressed, display changes as follows.



Display	Playing Mode
Blank	Repeats all discs
REPEAT	Repeats a single selection
RANDOM	After playing all the tracks on a disc at random, the unit changes it to the next disc, and play all the tracks on the disc at random again. However the order of disc change is not at random.

Pressing the APS button during a random play

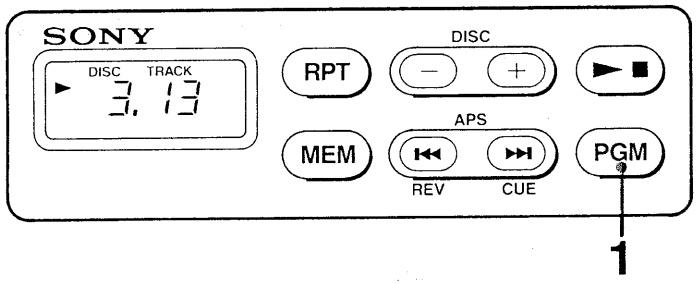


Plays the beginning of the selection being played

Plays the next selection at random

To go ahead at high speed, keep pressing ⏭ button.
To go back at high speed, keep pressing ⏮ button.
(For details, refer to page 7.)

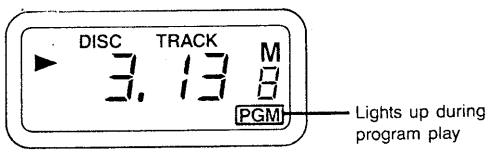
Playing the Desired Tracks in Desired Order — Program play



1 **Press PGM button during or before play.**

During program play, if the disc of memory number is not present or loaded upside down, it is accessed and Error display (E-04) appears.

Change into program play, and display as follows. If tracks are not memorized, PGM button does not work.



Note

During program play after memorizing desired selections, if a track which is not present in the disc is programed, it will be skipped. For example, if the thirteenth track of the third disc is memorized as the memory number 1, but the actual third disc has only ten tracks, play will start from the memory number 2.

Playing the Desired Tracks in Desired Order — Program play

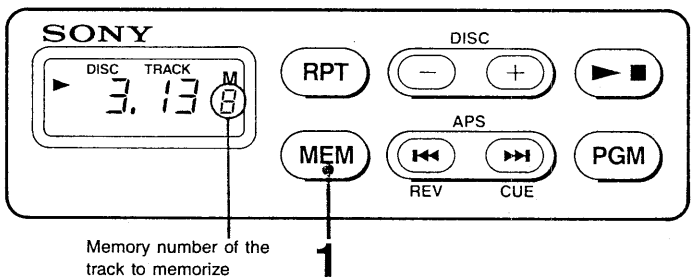
Pressing APS button during program play

	To locate a previous selection of memory number (APS REV)	To locate the next selection of memory number (APS CUE)
Press once	Locate the beginning of the selection being played.	Locate the next selection.
Press repeatedly	Memory number goes to a previous selection each time the button is pressed.	Memory number goes to the next selection each time the button is pressed.

To release program play mode

If PGM button is pressed, or if the tracks memorized are all error, program play mode is released.

One Touch Memory — Memorizing the selection being played

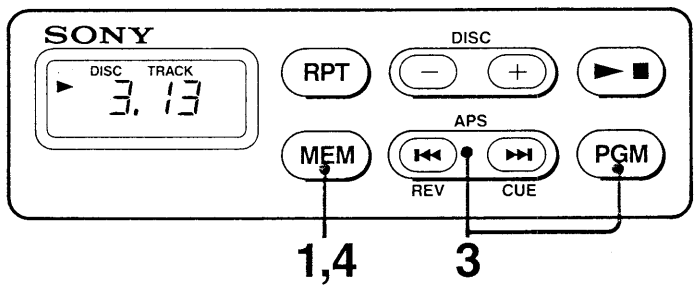


1 **Keep pressing MEM button for more than 1.5 seconds during play.**

Current selection being played is memorized, and memory number is displayed.

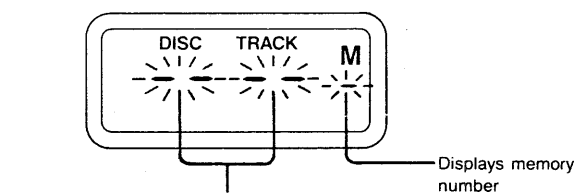
Enjoying the Variety of Playing Modes

Manual Memory — Memorizing the desired selection in random order



1 **Press MEM button lightly during play (less than 1.5 seconds).**

2 **The display will change as follows, and the unit will be ready to memorize the selections.**



If being memorized previously, the memorized DISC numbers and the memorized TRACK numbers are displayed.

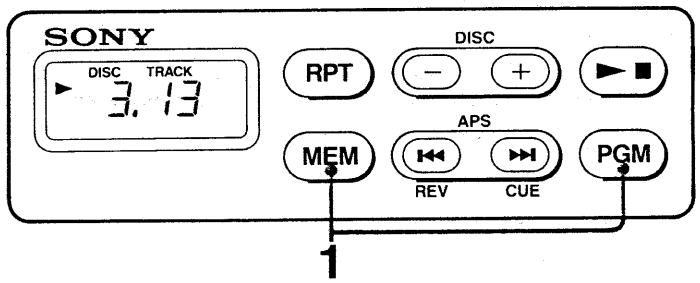
Note on manual memory

Interval time of each button operation is less than 5 seconds. If interval time is more than 5 seconds, the mode goes back to original mode.

Notes on both one touch and manual memory

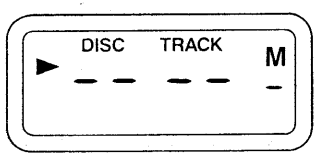
- Maximum 10 selections can be memorized.
- If another new selection is memorized in the previously memorized number, the previously memorized selection disappears.
- The selection memorized once does not disappear even though the magazine is removed.

To Cancel All Selections Memorized



1 **Keep pressing PGM and MEM button at the same time for more than 1.5 seconds during or before play.**

Memory numbers, disc numbers, and track numbers change into "— —" display.



3 **Choose the desired selection with the MEM, APS and DISC button.**

To choose the program number
Keep pressing MEM button for desired program number.

To choose the desired disc
Press –DISC+ button to choose the desired number to be memorized. Press DISC– button for lower number. Press DISC+ button for higher number.

To choose the desired track
Press APS button to choose the desired number to be memorized. Press ⏮ button for lower number. Press ⏭ button for higher number.

4 **To memorize the desired selection.**

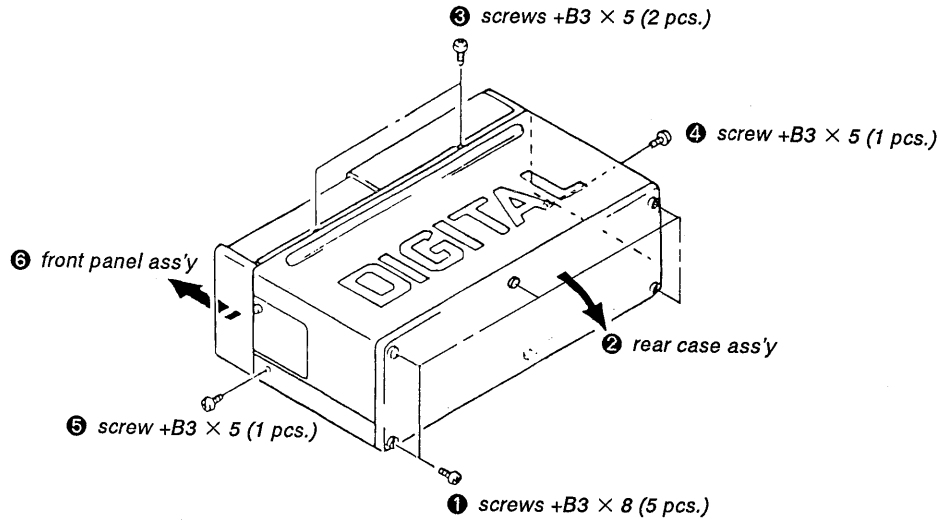
After choosing disc number and track number, press MEM button again. The selection is memorized and the memory number goes up and waits for the next selection to be memorized.

SECTION 3
DISASSEMBLY

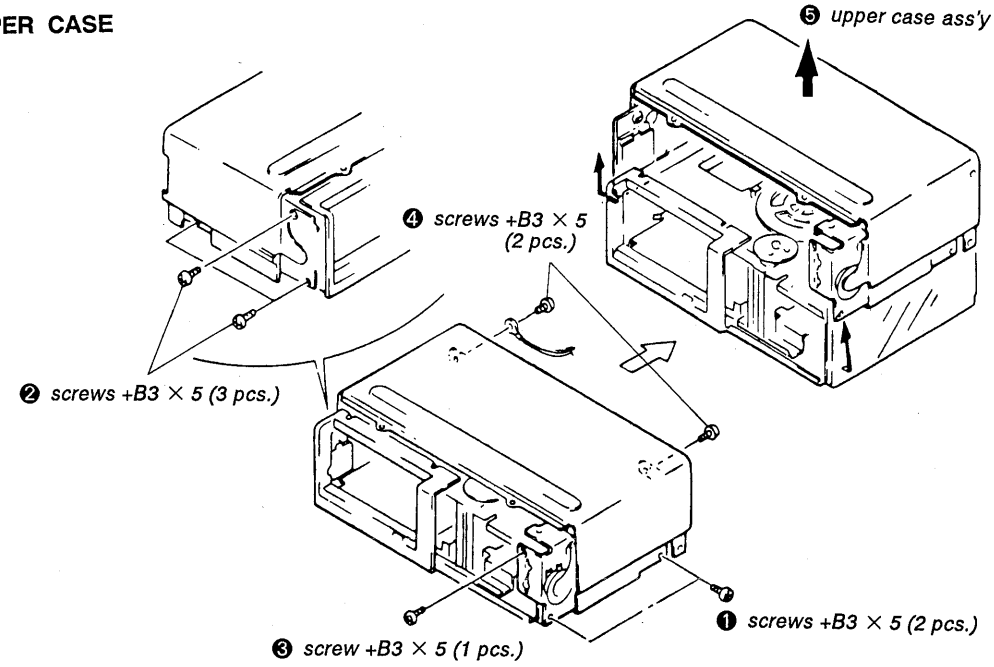
Note: Follow the disassembly procedure in the numerical order given.

REAR CASE

After removing the rear case, remove the front panel ass'y

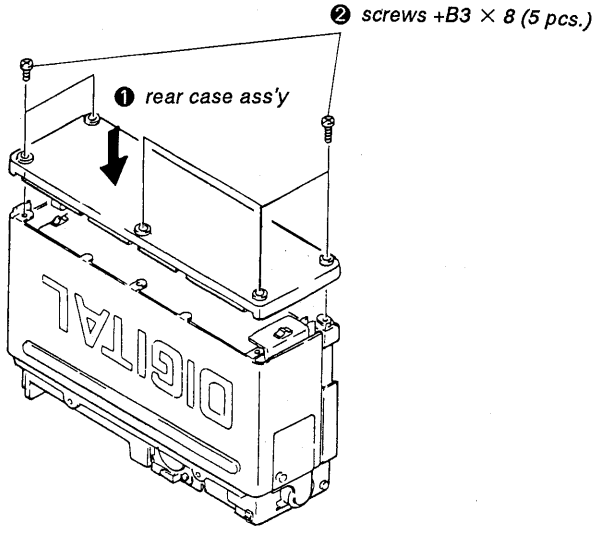


UPPER CASE



NOTE ON ASSEMBLY

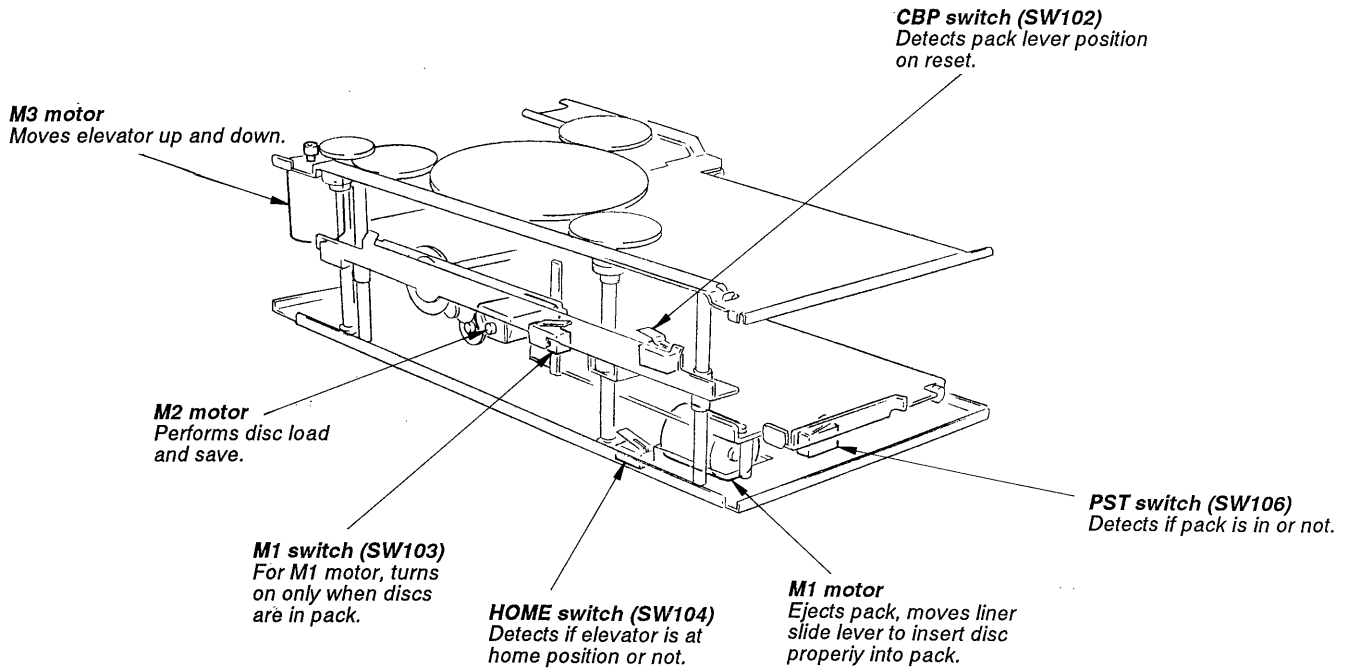
First assemble the rear case and next, the front panel ass'y



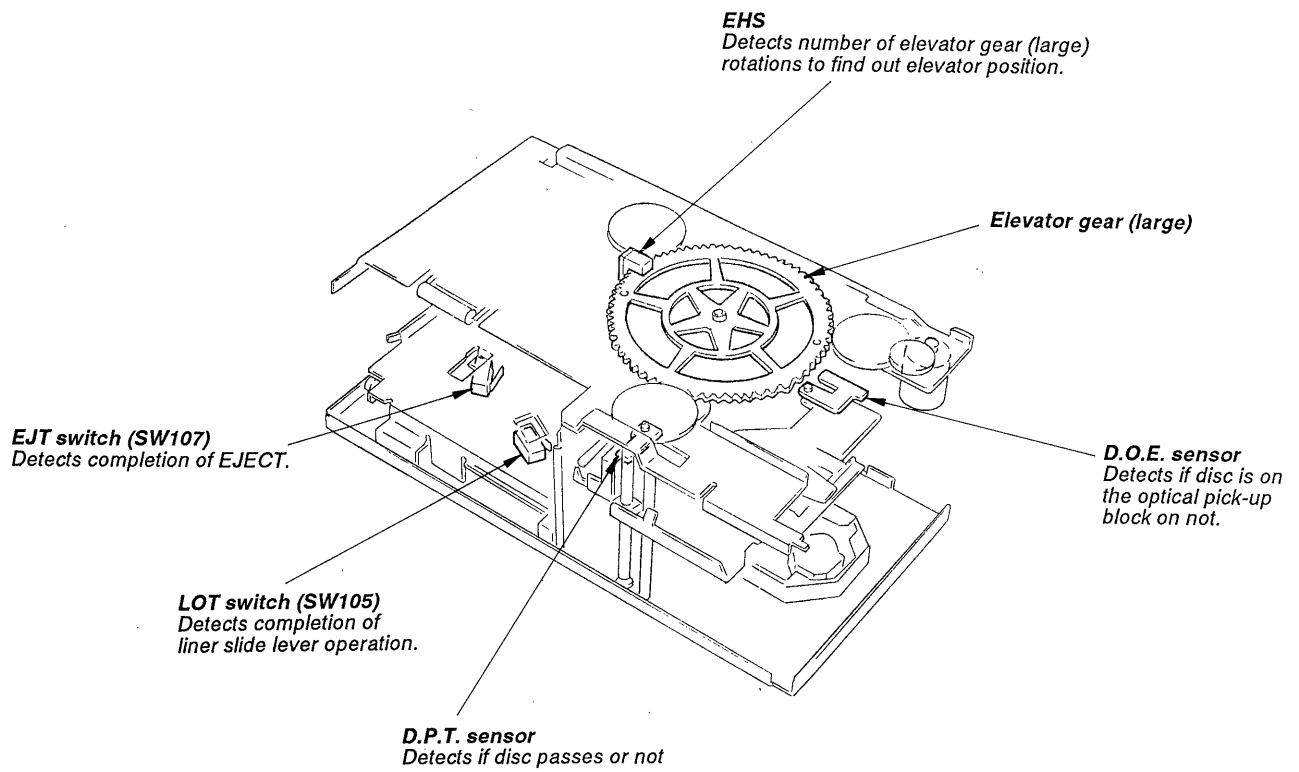
SECTION 4
MECHANISM SECTION DESCRIPTION

[SWITCH AND SENSOR OPERATIONS]

(1)

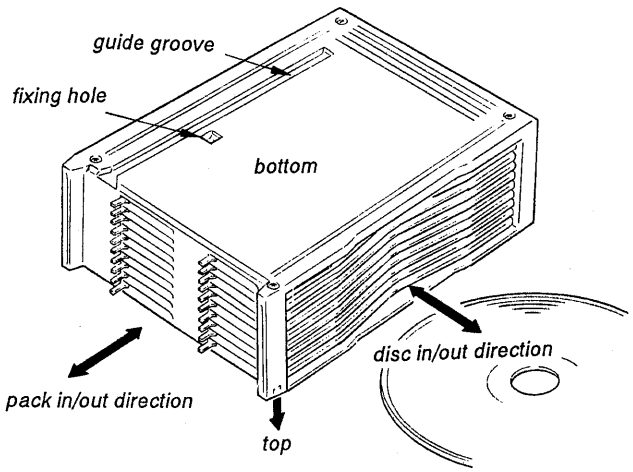

CBP switch (SW102)
Detects pack lever position on reset.
M3 motor
Moves elevator up and down.
M2 motor
Performs disc load and save.
M1 switch (SW103)
For M1 motor, turns on only when discs are in pack.
HOME switch (SW104)
Detects if elevator is at home position or not.
M1 motor
Ejects pack, moves liner slide lever to insert disc properiy into pack.
PST switch (SW106)
Detects if pack is in or not.

(2)

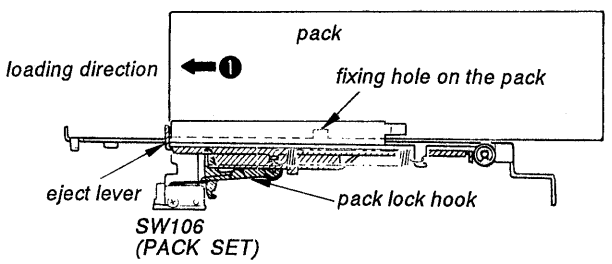

EHS
Detects number of elevator gear (large) rotations to find out elevator position.
Elevator gear (large)
EJT switch (SW107)
Detects completion of EJECT.
D.O.E. sensor
Detects if disc is on the optical pick-up block on not.
LOT switch (SW105)
Detects completion of liner slide lever operation.
D.P.T. sensor
Detects if disc passes or not

[PACK LOADING/EJECT OPERATION]

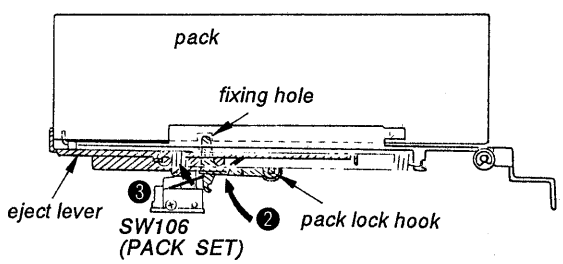
• **Pack**



• **Loding**

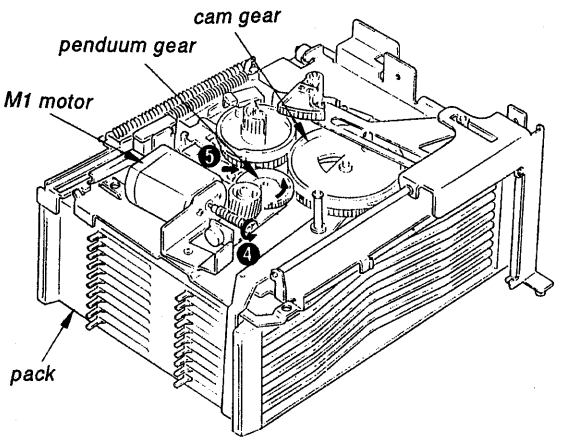


Insert the pack and press eject lever (❶).

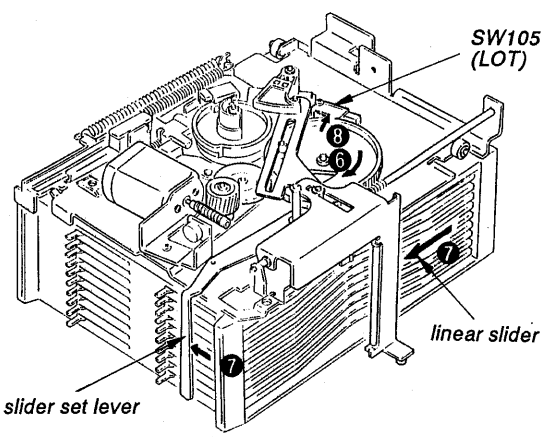


The hook fits into the fixing hole, and the pack is fixed. SW106 (PACK SET) goes off (❸), informs the completion of loading to the microcomputer.

(Bottom view)



M1 motor rotates clockwise (❹), and engages the pendulum gear to the cam gear (❺).

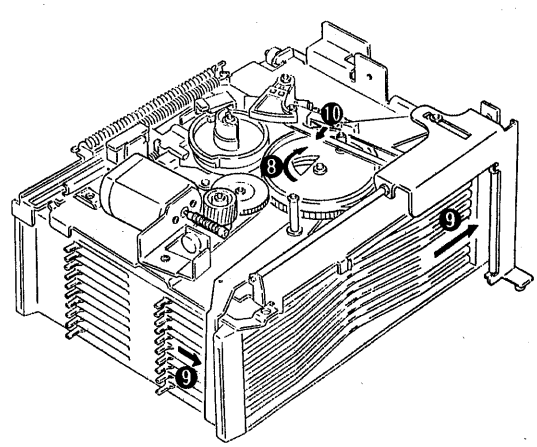


M1 motor rotates the cam gear (❻) ,and slides the linear slider and the slider set lever (❼).

At this time, the linear slider presses a disc into the pack, and the slider set lever sets the light blue lever of the pack to the initial position.

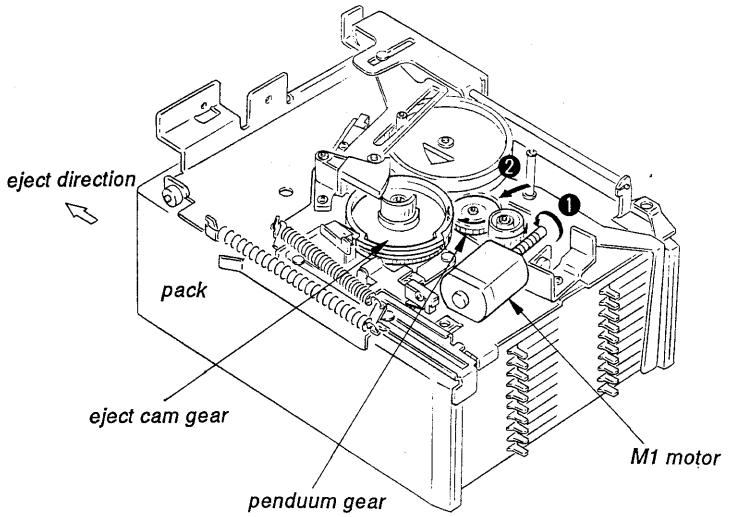
The cam gear makes SW105 (LOT) that detects the linear slider operation goes on.

M1 motor rotates the cam gear once (❽), then the linear slider and the slider set lever return to the initial position (❾), SW106 (LOT) goes off (❿), detects completion of operation, and makes M1 motor stops.

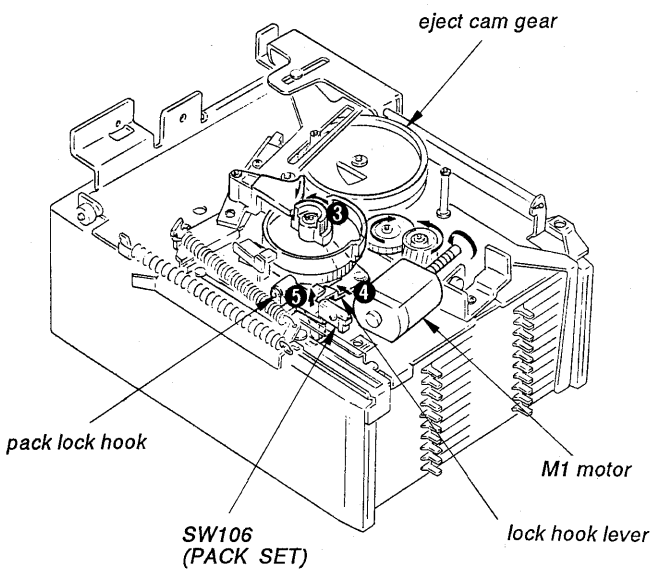


• **Eject**

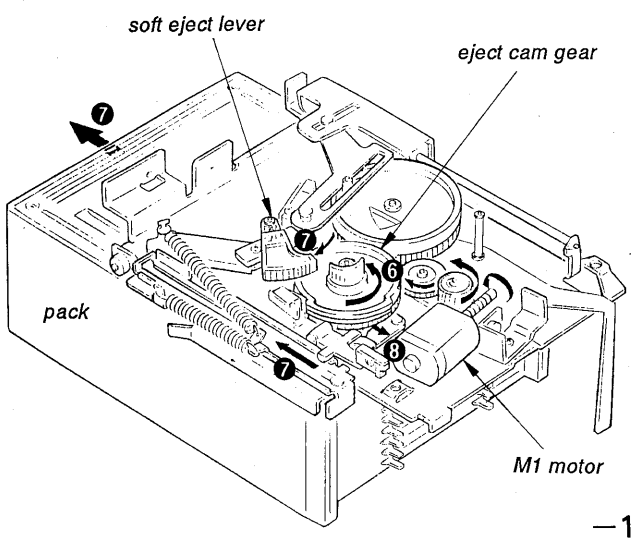
(Bottom view)



M1 motor rotates counterclockwise (❶), and engage the pendulum gear to the cam gear (❷).



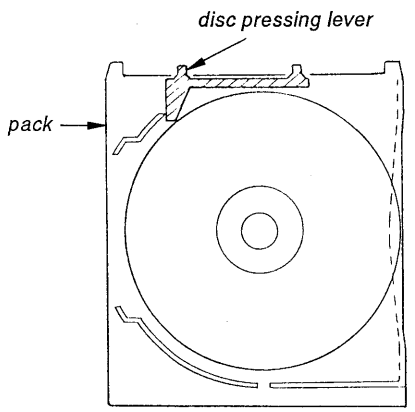
M1 motor rotates the cam gear (❸), then the lock hook lever gets in under the pack lock hook (❹), raise the pack lock hook (❺), and the lock is released.
At this time, SW106 (PACK SET) goes on, and informs the eject of the pack to the microcomputer.
The eject cam gear makes SW107 (EJECT) that detects eject operation goes on.



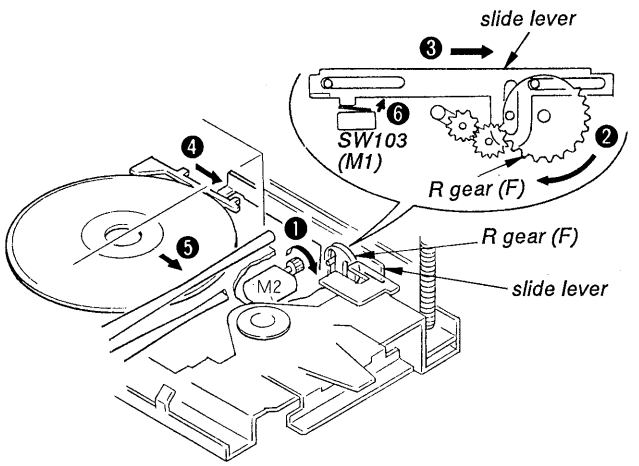
M1 motor rotates the eject cam gear (❻), drives the soft eject lever and the eject lever, then ejects the pack (❼).
The cam gear rotates once and returns the lock hook lever to the initial position (❽). SW107 (EJECT) goes off, detects the completion of eject, and makes M1 motor stops.

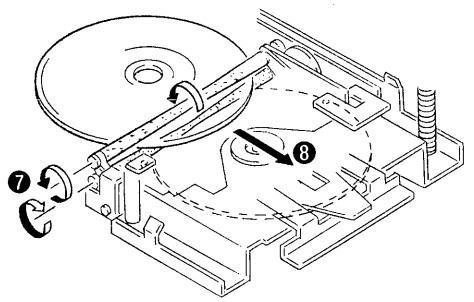
[DISC LOADING AND SAVING]

• Pack



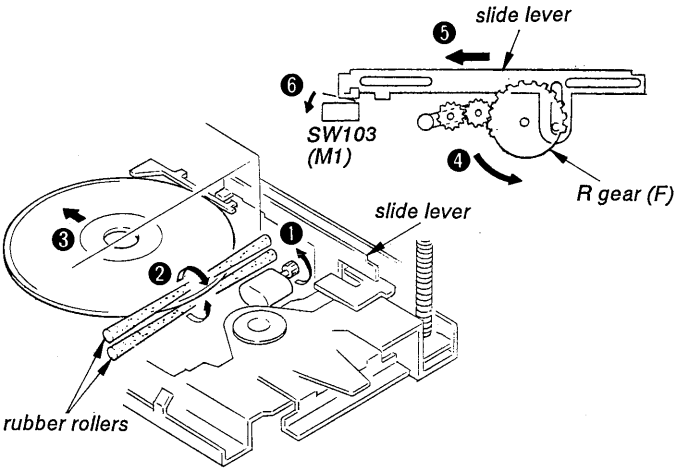
• Loading

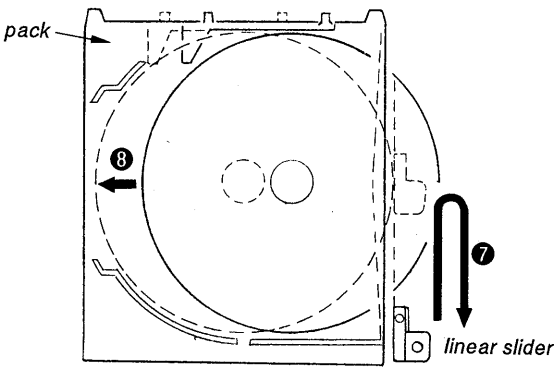




M2 motor rotates clockwise (❶) and rotates R gear (F) through some gears (❷).
R gear (F) moves the slide lever (❸) and pulls the lever of the pack (❹), then the disc is pushed out (❺).
At this time, the disc position detection SW103 (M1) goes off, then M1 motor doesn't rotate.
Also, M2 motor rotation (❶) rotates two rubber rollers at the same time through gears, then its operation slides the disc upon the spindle motor (❽).

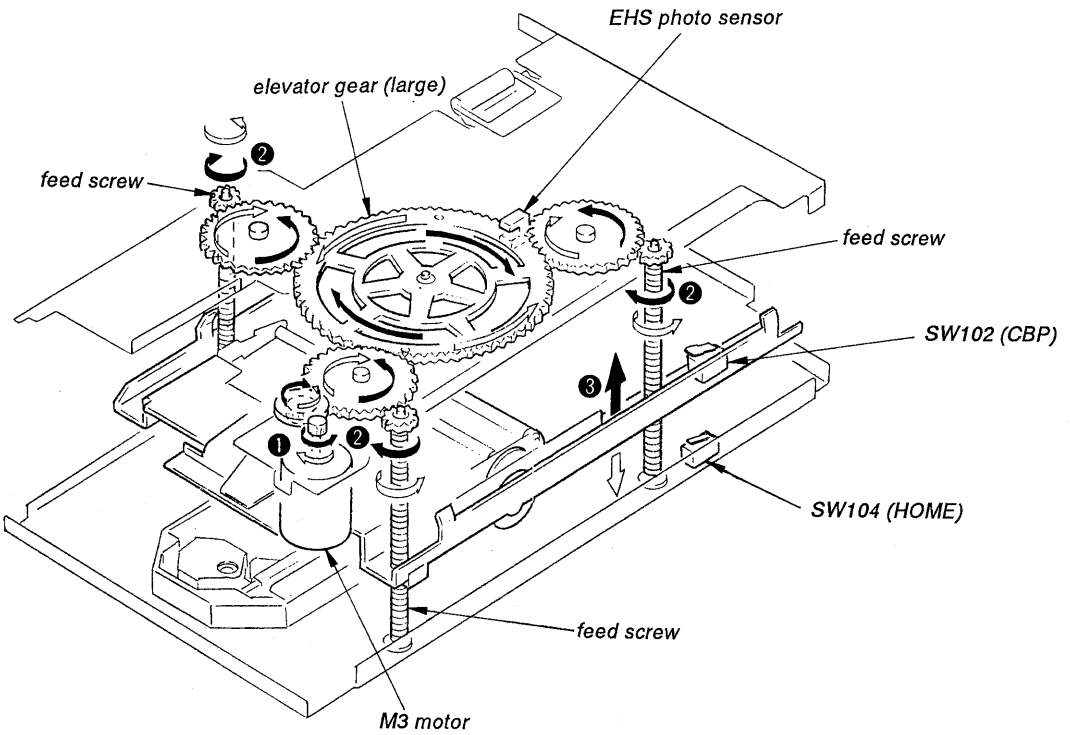
• Save

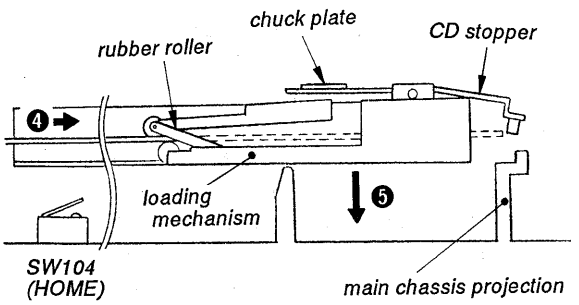


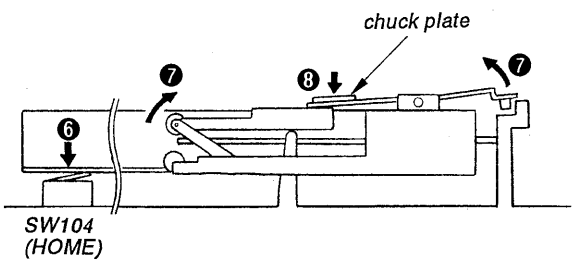


M2 motor counterclockwise rotation (❶), rotates two rubber rollers, then its operation saves the disc.
But the rubber rollers doesn't save the disc completely.
Because of it, M1 motor is used.
M2 motor rotation rotates R gear (F) (❹) and moves the slide lever (❺) at the same time through gears.
At this time, SW103 (M1) goes on (❻), M1 motor rotates clockwise, operates in the same manner as the pack loading operation, moves the linear slider, saves the disc into the pack (❽), and returns the lever of the pack.

[ELEVATOR UP/DOWN]





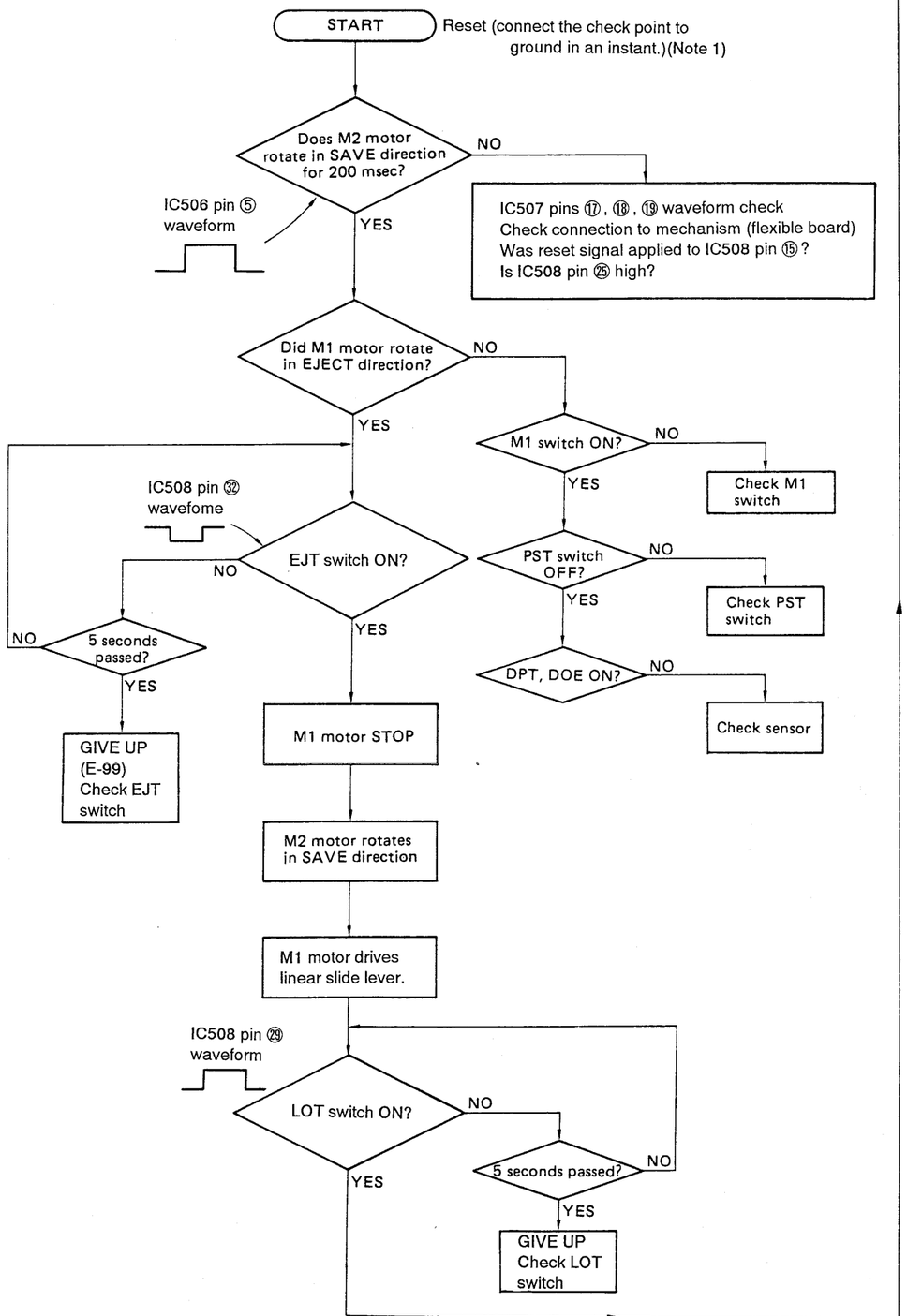


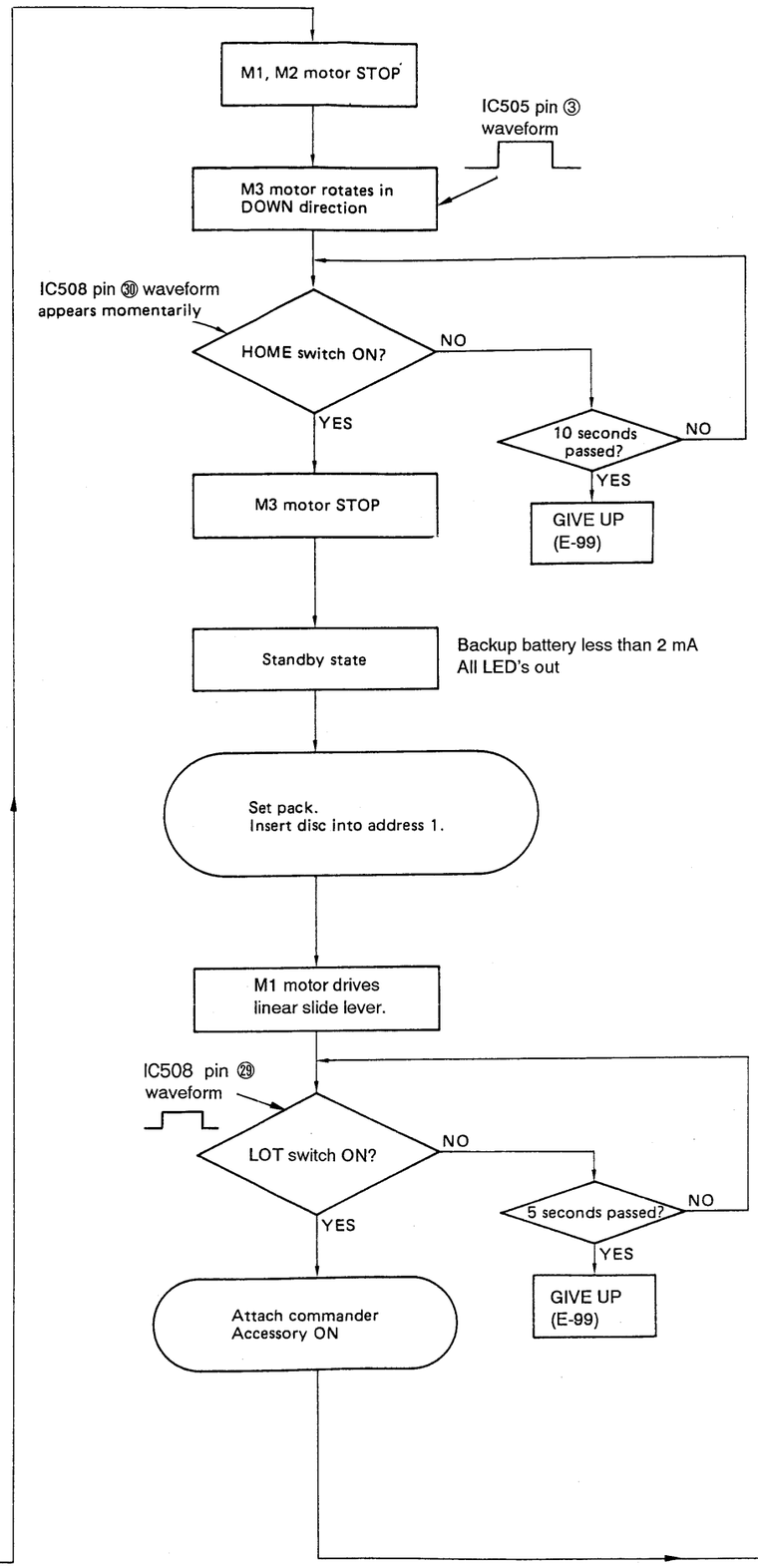
Clockwise rotation of M3 motor (❶) is transmitted to the feed screws through gears (❷), and its force lifts the elevator section up (❸).
When the disc is loaded to the elevator section (❹), the elevator drops (❺).
When SW104 (HOME) goes on (❻), M3 motor stops and Two rubber rollers and CD stopper leave from the disc (❼). And when the magnet of the chuck plate is attracted to the turntable (❽), the disc is fixed on the turntable, then it is possible to play the disc.
EHS (Elevator Height Sense) photo sensor detects two holes on the elevator gear (large), and informs the address of the disc pack to the microcomputer.
When the elevator gear (large) rotates half, the address changes once.
SW102 (Come Back Position) is the address detection switch by looking up the lever of the pack. When the microcomputer doesn't memeory the address of the disc return after reset or the like .
It is not used usually.

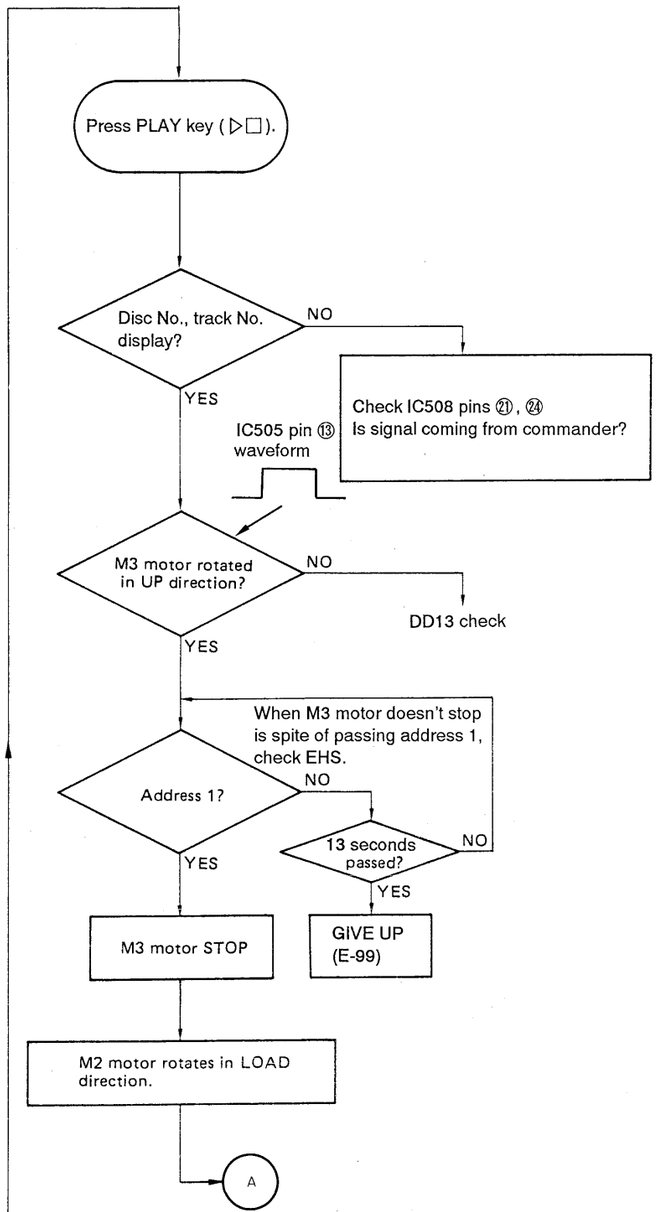
SECTION 5
OPERATION FLOW CHART

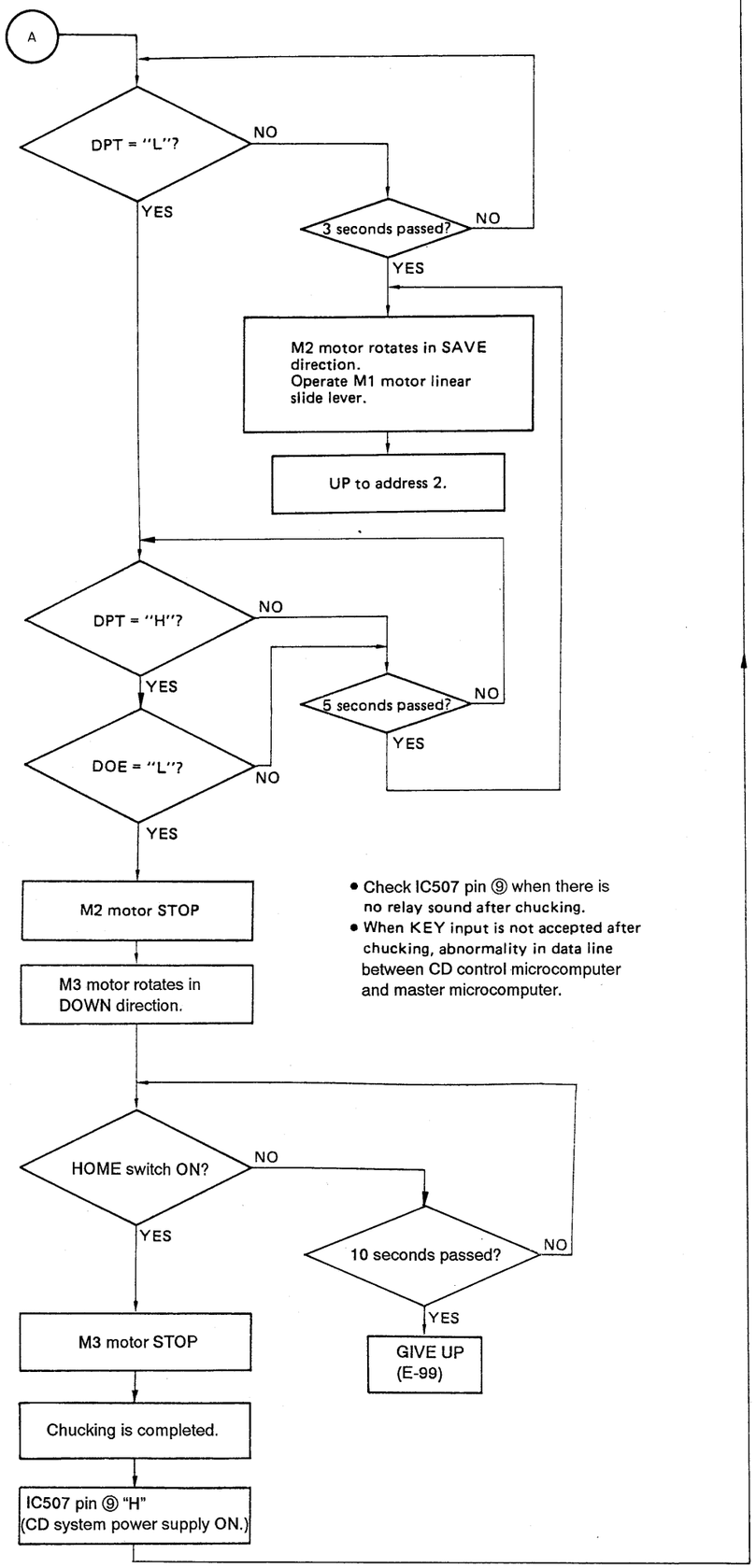
Please use this flow chart as reference on troubleshooting.

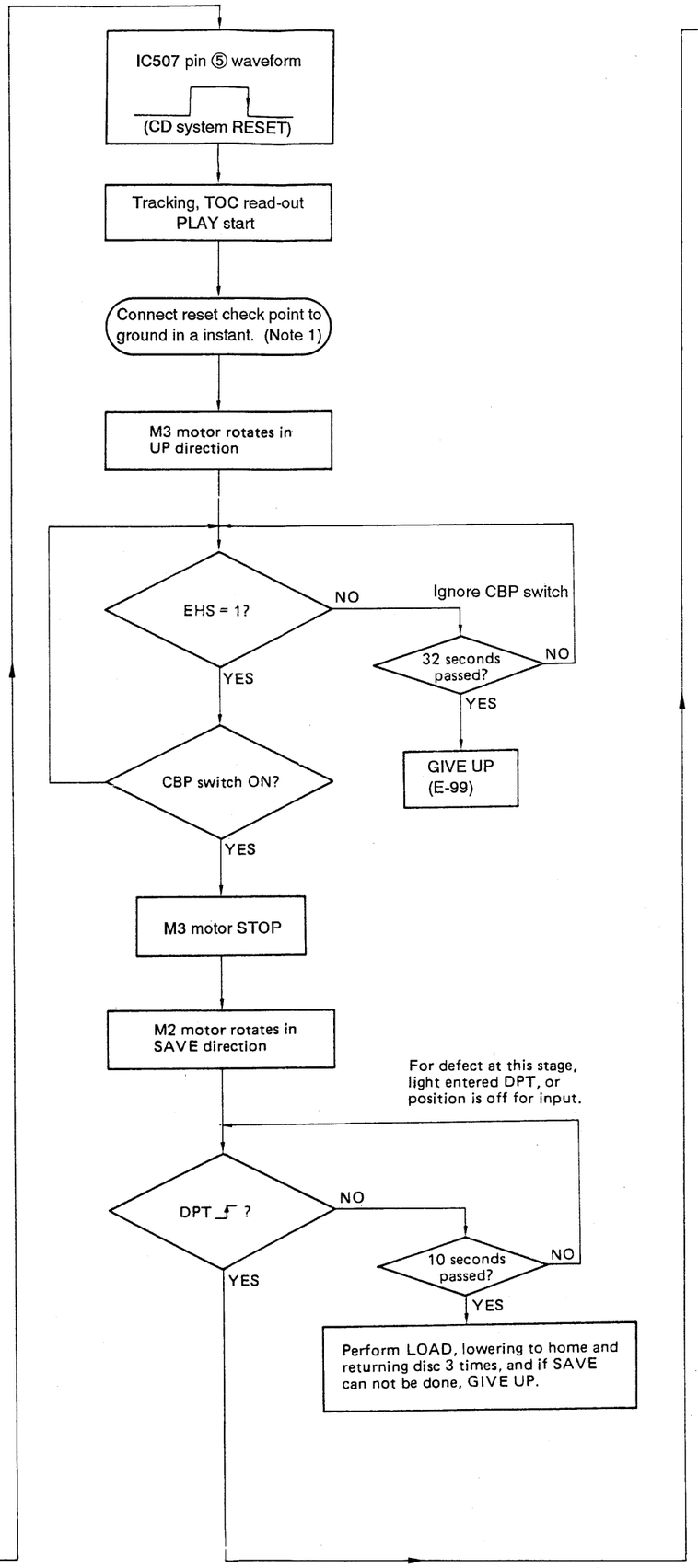
Initial state
- Set the elevator upper than home position by rotating with hand the elevator gear(large).
- No pack
- Acc turns off.

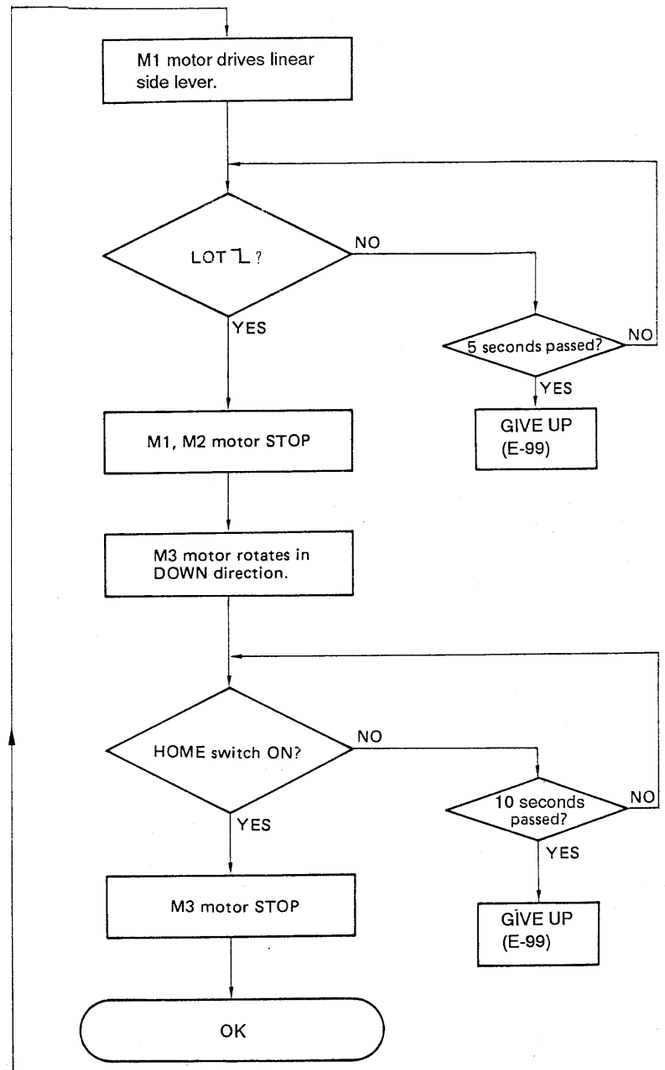




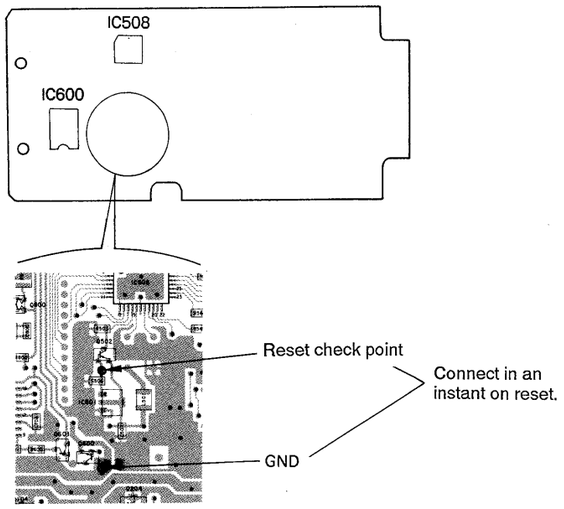





IC507 pin ⑤ waveform
(CD system RESET)
Tracking, TOC read-out PLAY start
Connect reset check point to ground in a instant. (Note 1)
M3 motor rotates in UP direction
EHS = 1?
NO
Ignore CBP switch
YES
32 seconds passed?
NO
YES
CBP switch ON?
GIVE UP (E-99)
YES
M3 motor STOP
M2 motor rotates in SAVE direction
For defect at this stage, light entered DPT, or position is off for input.
DPT ⌐ ?
NO
YES
10 seconds passed?
NO
YES
Perform LOAD, lowering to home and returning disc 3 times, and if SAVE can not be done, GIVE UP.



Note1 : Reset
ANALOG BOARD (SideA)



SECTION 6
MECHANICAL ADJUSTMENTS

[ROTATE ELEVATOR GEAR (LARGE) POSITION (LOCATION 10.5) ADJUSTMENT]

1. The elevator gear (middle) in the arrowed direction and place the top plate at the position where there are no clearances between the bottom face of the top plate and the top edges of the three claws.

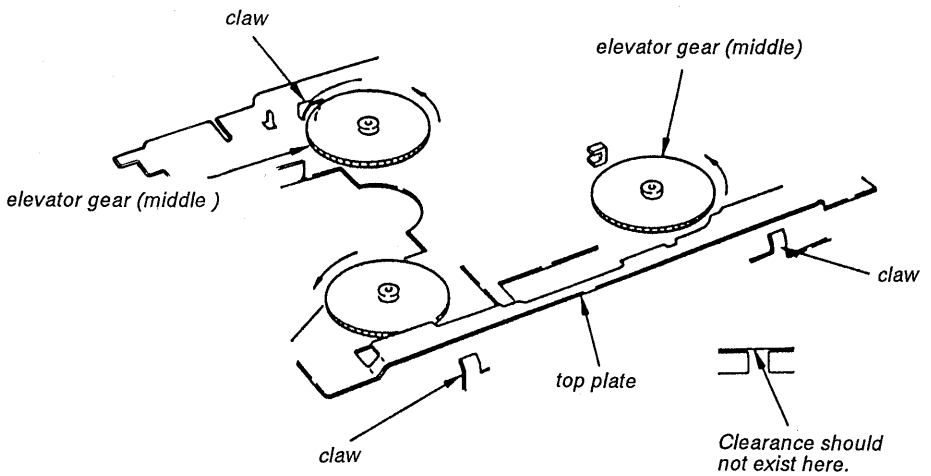
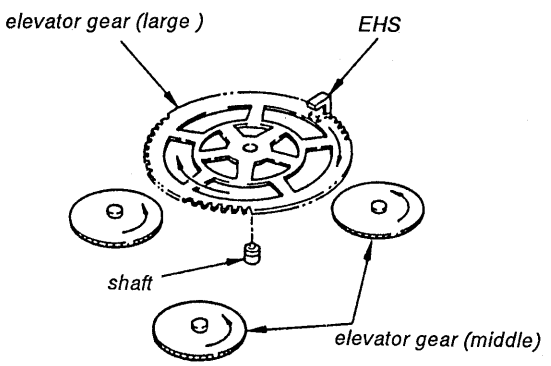
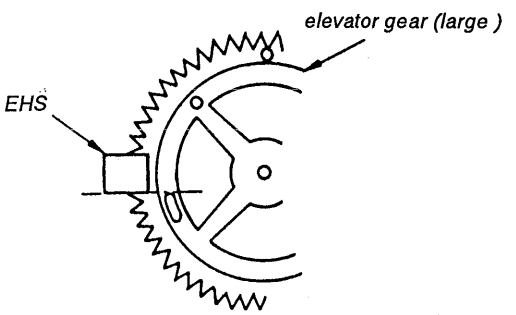


Fig. 1

2. Put the elevator gear (large) on the shaft of the top plate taking care not to move the elevator gears (middle). The elevator gear (large) should be fastened by the top plate and EHS protrusion and should position in the relationship with the EHS as shown in Fig. 1.
3. After the placing, fix the elevator gear (large) with a retaining ring.





Edge of EHS protrusion and edge of protrusion on the elevator gear (large) should be aligned as shown.

Fig. 2

[HOMING ADJUSTMENT]

Note: 1. MG-CDX-20 should be completely assembled.
2. It is neccessary to operate mechanism deck alone.

Ex.) Connect 18P flexible cable to Analog board and control with the remote commander unit.

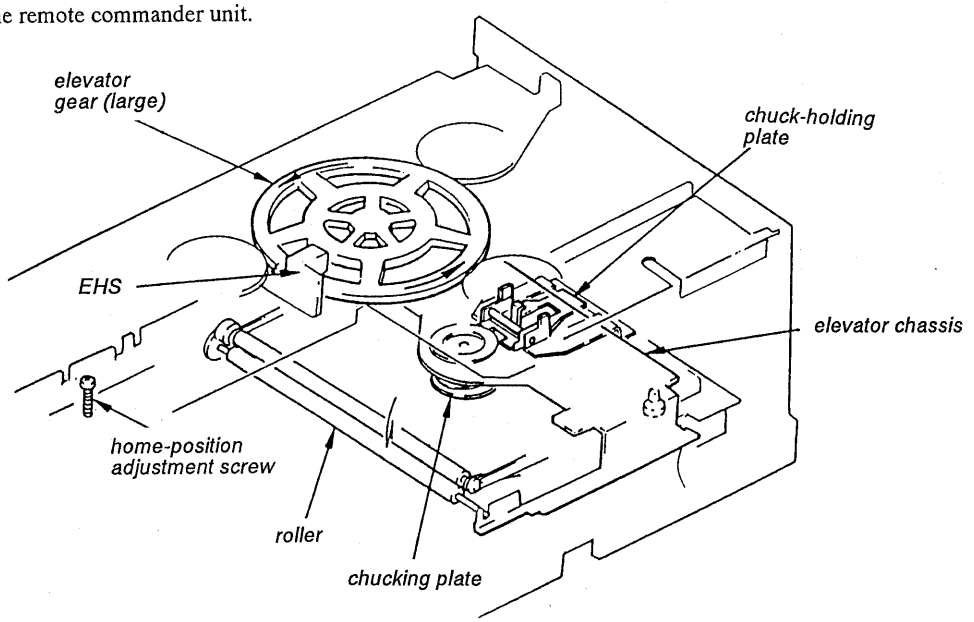


Fig. 3

1. Put the disc magazine containing several discs in the changer.
2. Initialize the changer.
3. Pull off the first disc.
4. Wait until the elevator lowers down to the home position.
5. Move the elevator gear (large) so that the clearance between the inner edge face of the chucking plate and edge of the top face of the stainless chuck-holding plate becomes in 1.5 mm (1/16 inches) as shown in Fig. 4.
6. Make a dot marking on the elevator gear (large) as shown in Fig. 5.
7. Re-put the first disc in the disc magazine.
8. Pull off the first disc again. The dot marking made in the step 6 above should position as shown in Fig. 5.
9. Fine adjust the position of the elevator gear (large) with home-position adjustment screw shown in Fig. 3.

Adjustment Screw Position	Large Elevator Gear Position Displacement
One (1) turn in clockwise	15 (fifteen) degrees clockwise
One (1) turn in counterclockwise	15 (fifteen) degrees counterclockwise

10. After Adjustment, apply suitable locking compound to home-position adjustment screw.

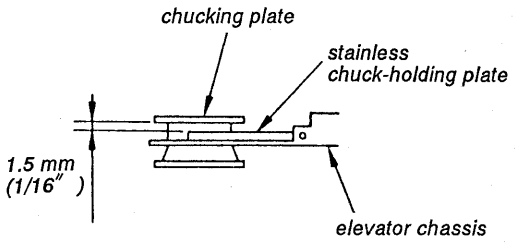


Fig. 4

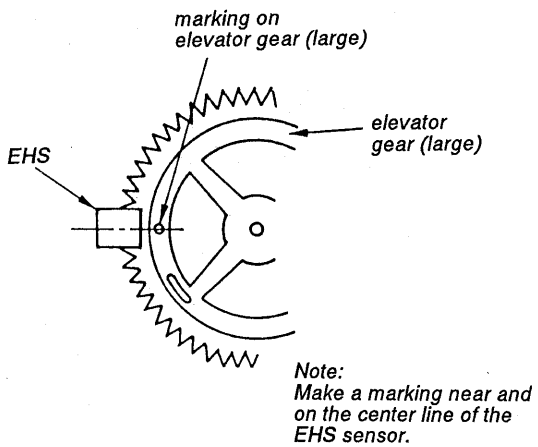


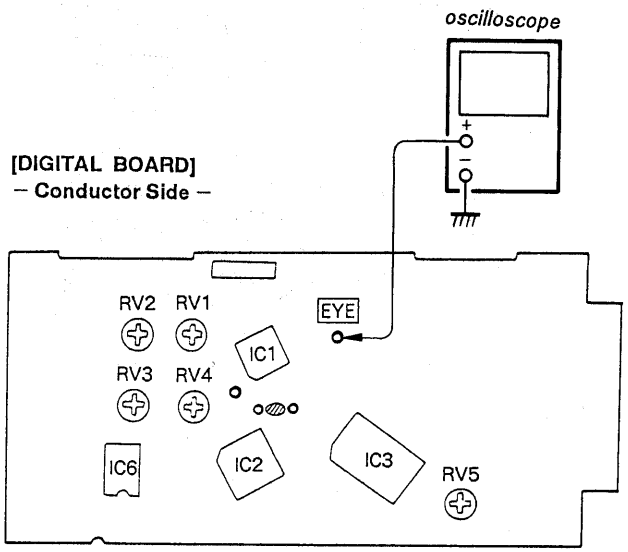
Fig. 5

SECTION 7
ELECTRICAL ADJUSTMENTS

1. Perform adjustments in order given.
2. Be sure to use the disc "YEDS-18" parts code : 3-702-101-01, but only when indicated.
3. Power supply voltage : DC 14.4 V (more than 3 A)

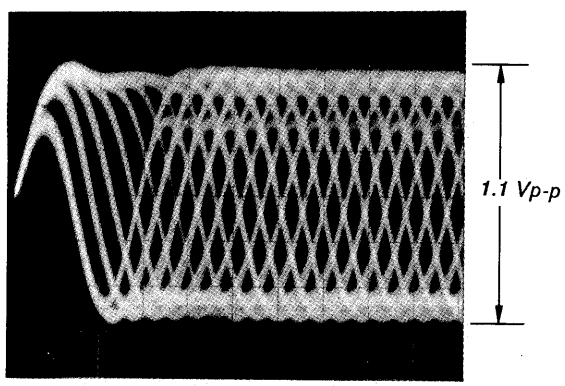
1. Focus Offset Adjustment

Procedure :



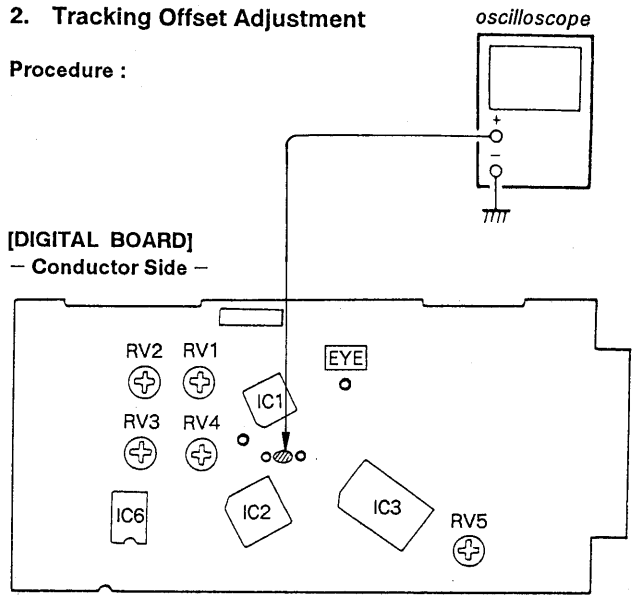
1. Connect the oscilloscope to DIGITAL board test point EYE.
2. Put the set into play mode by loading the disc.
3. Adjust digital board RV2 so that the oscilloscope waveform eye pattern is good.
   (A good eye pattern means that the diamond shape (◇) in the center of the oscilloscope can be clearly distinguished.)

Volt/Div : 200 mV
Time/Div: 0.5 µSec



2. Tracking Offset Adjustment

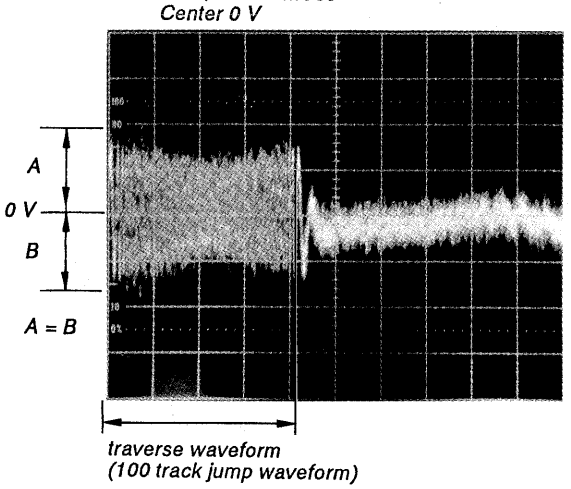
Procedure :



1. Connect the oscilloscope to DIGITAL board test point.
2. Put the set into play mode by loading the disc.
3. Press the ⏮ or ⏭ (or ◀◀ , ▶▶) button, then check the traverse waveform*.
4. Adjust RV1 (digital board) so that oscilloscope reading is symmetrical in relation to 0 V.

*Traverse waveform : This is the tracking error waveform appears when crossing the track.

Volt/Div : 0.5 V
Time/div : 2 mSec
Center 0 V



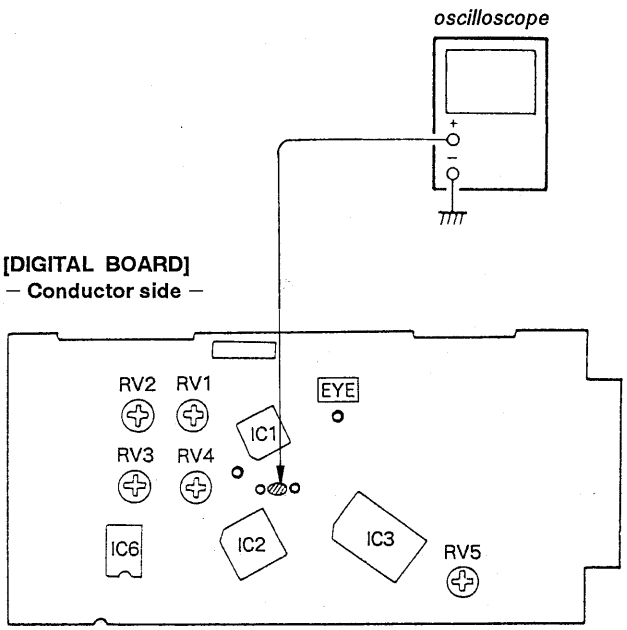
traverse waveform
(100 track jump waveform)

3. Tracking Gain Adjustment (coarse adjustment)

This adjustment is to be performed when replacing the following parts.
- Optical Pick-up Block
- RV4

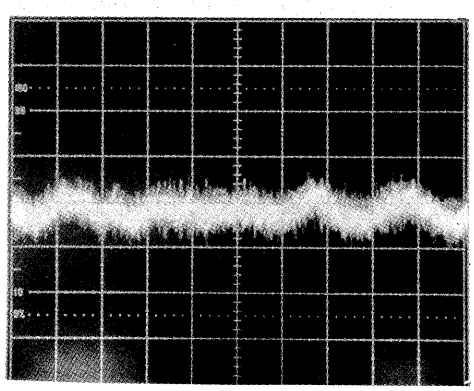
This adjustment should be performed after focus offset and tracking offset adjustments are completed.

Procedure :

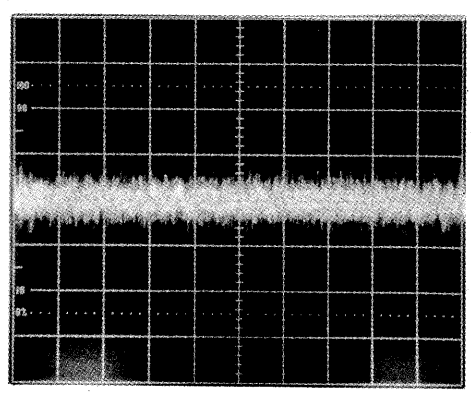


1. Connect the oscilloscope to DIGITAL board test point.
2. Put the set into play mode by loading the disc.
3. While turning DIGITAL board RV4 clockwise from left check the oscilloscope waveform.
   Fix RV4 at the position where the waveform disappears.

Volt/Div : 0.5 V
Time/Div: 2 mSec



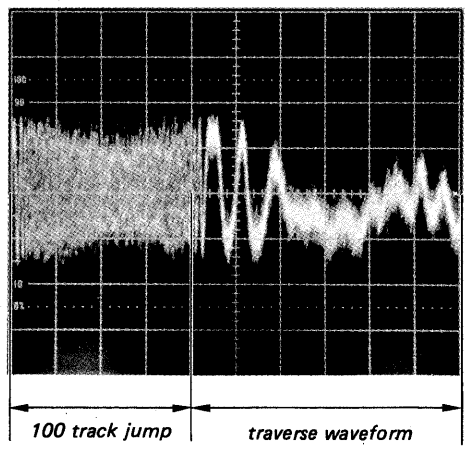
waveform when the wave appears



waveform when the wave dissappeared

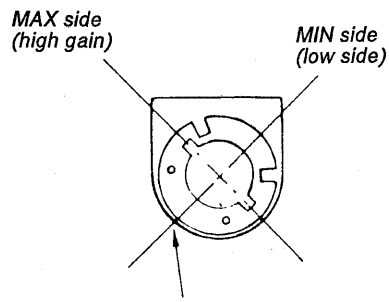
• When gain is lowered...

When selecting by pressing ⏮ or ⏭ button, the track jump waveform doesn't calm down clearly, and the selection is located slowly.
(Because of low tracking gain, the brake application is poor.)



• When gain is highered...

Operation noise is heard due to a scratch or dust, then operation will be instability.



When VR contact point is here, it is at standard position.

RV4 standard position

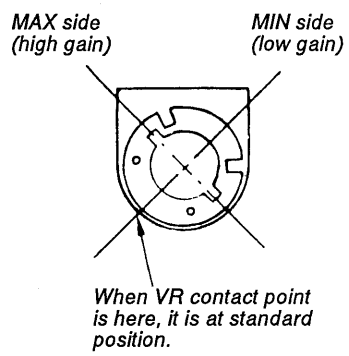
4. Focus Gain Adjustment (coarse adjustment)

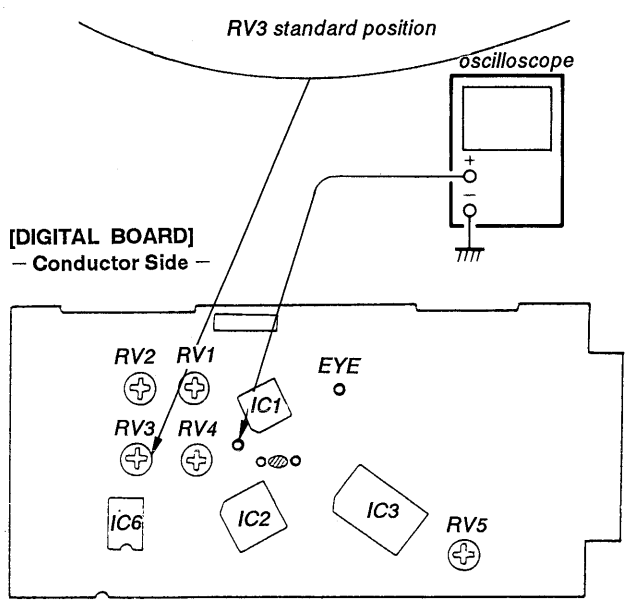
This adjustment is to be performed when replacing the following parts.

- Optical Pick-up Block
- RV3

Procedure :

1. Set RV3 (DIGITAL board) to the standard position.
2. Check that there is not an abnormal amount of operation noise (sounds like white noise) from the 2-axis devise (lens section of the optical pick-up block). If there is, turn RV3 slightly counter clockwise.





• When gain is lowered...

The set does not play because of no focus operation.

• When gain is highered...

Operation noise is heard due to a scratch or a dust, then operation will be unstable.

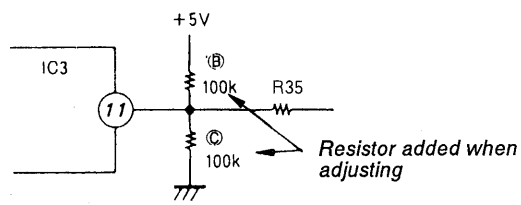
5. PLL Freerun Frequency Adjustment

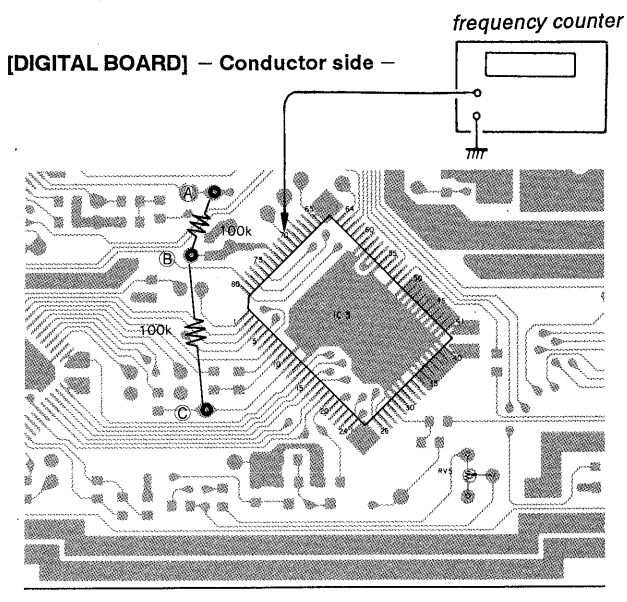
This adjustment is to be performed when replacing the following parts.

- Optical Pick-up Block
- IC2, IC3, RV5, R33

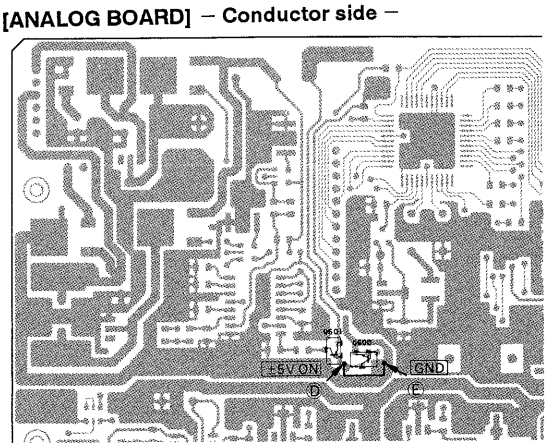
Procedure :

1. Unsolder the solder bridge at Ⓐ.
   (IC3 pin ⑤ is opened)
2. Connect 100 kΩ ± 1% metalized film resistors to Ⓑ, Ⓒ.
   (This is to set the IC3 pin ⑪ voltage to 2.5 V)
3. Install a test jumper wire between Ⓓ and Ⓔ on ANALOG board.
4. Connect the frequency counter to DIGITAL board test point PLCK (IC3 pin ⑳).
5. Turn the power switch on (Do not use the disc), then adjust RV5 so that the frequency is 4.3218 MHz ± 10 kHz.
6. After adjusting, reset 1, 2 and 3 as original.





[ANALOG BOARD] – Conductor side –

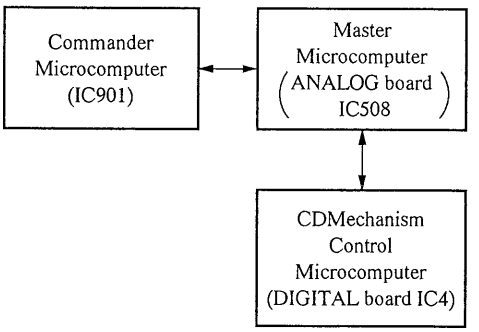


SECTION 8
DIAGRAMS

8-1. CIRCUIT DESCRIPTION

Description of IC's

On this model, data and control signal transmission and reception is done among the commander microcomputer , master microcomputer and CD control microcomputer. The various operations are performed by these signals.


Commander Microcomputer (IC901)
Master Microcomputer (ANALOG board IC508)
CDMechanism Control Microcomputer (DIGITAL board IC4)

Master Microcomputer (ANALOG BOARD IC508 μPD7508HG) Pin Functions

Pin No.	Signal Name	I/O	Function
1	$\overline{\text{TUON}}$	I	Remote control signal input; "L" when there is input.
2	ACC5	I	Checks accessory ON/OFF.
3	$\overline{\text{SRQ}}$	I	Signal input from CD control microcomputer. Informs master of time code renewal error, command execution completion, etc. L : active
4	$\overline{\text{ACK}}$	I	Acknowledge signal input from CD control microcomputer. Signal means CD control microcomputer has received data.
5	MUTE1	O	Muting output.
6	$\overline{\text{CD}-\text{CS}}$	O	After this pin is made low, data transmission between CD control microcomputer and master microcomputer is performed.
7	RW/$\overline{\text{DW}}$	O	Indicates data transmission direction between CD control microcomputer and master microcomputer is performed.
8	A/$\overline{\text{D}}$	O	Indicates if adress is being output or data is being input/output to CD control microcomputer.
9	AD0	I/O	Lines for data communication between mechanism control microcomputer and master microcomputer.
10	AD1		
13	AD2		
14	AD3		
15	RST	I	Reset input pin. Program start 0 address when it goes from H to L.
16	XT1	I	Clock oscillation pin. 4.19 MHz
18	XT2	O	
17	BU5	I	Power supply pin. +5 V.
19	EHS	I	External interrupt input pin. Interrupt is generated when EHS sensor goes from low to high.
20	EHS	I	Monitors EHS state.
21	SWCK	I	Clock input pin for serial data output from commander.
24	SWDT	I	Input pin for serial data output from commander.
25	DDON	O	Accessory ON: H Accessory OFF: L During accessory off, goes high for EJECT or PACK SET.
26 – 28	KO1 – KO3	O	KO1 – KO3 } Key Matrix signals
29 – 32	KI0 – KI3	I – I	KI0 – KI3 }
35 36	$\overline{\text{M3}}$ M3	O O	Control output to elevator control motor (M3) control IC.

Pin ㊲	Pin ㊱	
L	L	DOWN
L	H	UP

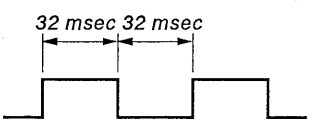
Pin No.	Port Name	I/O	Function
37			Ground.
40	$\overline{SCK}$	O	Clock for serial data transmission.
41	$\overline{SDCS}$	O	"L" during data output to commander ; otherwise "H".
42	$\overline{SDT}$	O	Data output.
43	STRB	O	Data end signal to port expander IC (IC507)

Pin No. 11, 12, 33, 34, 39 are not used.

Note 1: Key Matrix Signals (IC508 pins ㉙–㉜)

	KI0 ㉙	KI1 ㉚	KI2 ㉛	KI3 ㉜
KO1 ㉖	DSPSEL	TPACK	BU	HOT
KO2 ㉗	LOT	PST	CBP	EJT
KO3 ㉘	EJKEY	HOME	DOE	DPT

DSPSEL
ON when DSPSEL output by commander is high.
Determines timing for data output from master micro-computer to commander. Output begins at the edge of going from ON to OFF, so when OFF, output can not be done.
In accessory ON state, the program stops unless there is DSPSEL input signal.



64 msec interval
Duty 50% signal

BU
Checks backup voltage. Goes ON when voltage is high.

HOT
Goes ON when temperature is too high.
When it goes ON, the same operation occurs on reset.
No keys, except for EJECT, are accepted while it is ON.

LOT
ON during linear slide lever operation, OFF when operation ends.

PST
ON when pack is in.

CBP
Detects pack lever, and returns disc to that position when ON.

EJT
Goes ON when pack ejection is completed.

EJKEY
EJECT KEY input; always accepted except for during reset processing and pack setting.

HOME
Home switch detection; only performs home switch detection for reset processing and elevator control.

DOE
Detects if disc is in or not for reset processing and LOAD processing.

DPT
Detects if disc was in or not for reset processing, LOAD processing and SAVE processing.

Port Expander IC (ANALOG BOARD IC507 CX7991) Pin Functions

<table>
<tr><th>Pin No.</th><th>Signal Name</th><th>I/O</th><th>Function</th></tr>
<tr><td>1

2

4</td><td>M1

M2

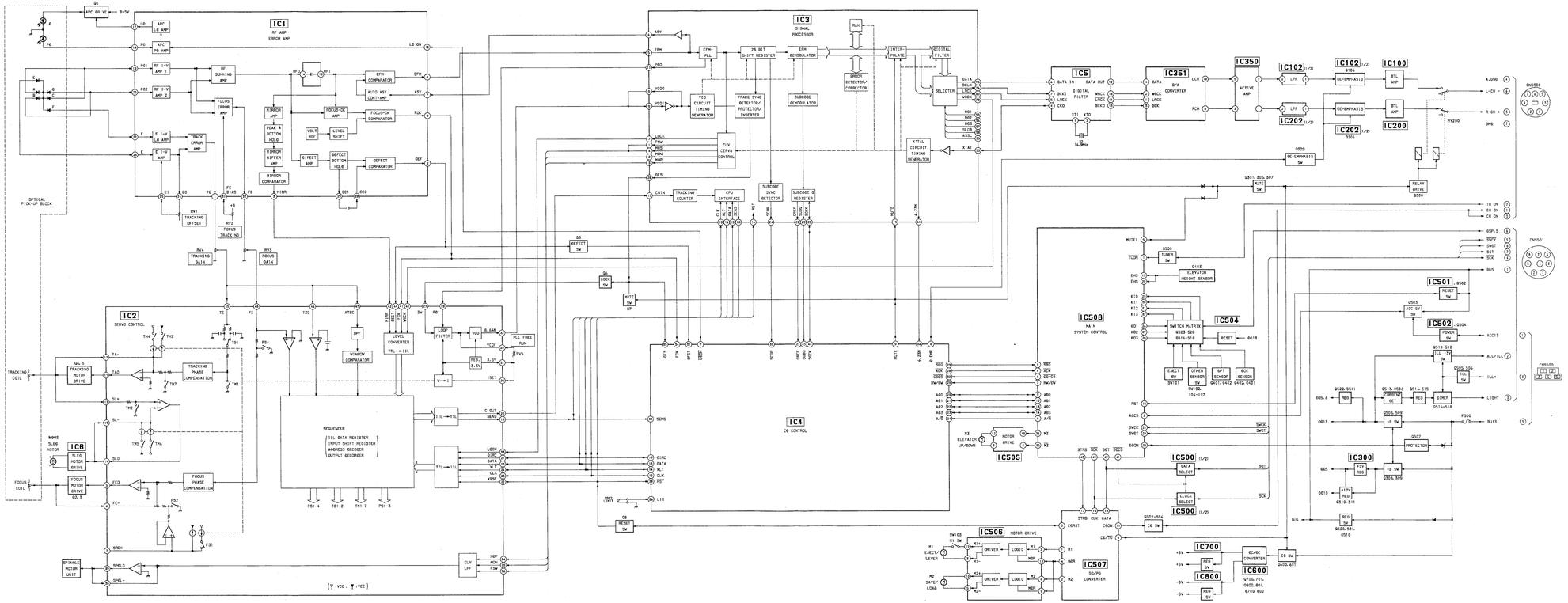
MDR</td><td>O

O

O</td><td>MI motor (EJECT/LEVER OUT), M2 motor (SAVE/LOAD) control
<table>
<tr><th>①</th><th>②</th><th>④</th><th>Operation</th></tr>
<tr><td>H</td><td>L</td><td>L</td><td>EJECT</td></tr>
<tr><td>L</td><td>H</td><td>L</td><td>LOAD</td></tr>
<tr><td>L</td><td>L</td><td>H</td><td>SAVE, LEVER OUT</td></tr>
<tr><td>H</td><td>L</td><td>H</td><td>SAVE</td></tr>
<tr><td>L</td><td>L</td><td>L</td><td>OFF</td></tr>
</table></td></tr>
<tr><td>5</td><td>CDRST</td><td>O</td><td>CD control microcomputer etc. reset signal output. Outputs high after chuking is completed, turns power on then outputs low 200 msec later.</td></tr>
<tr><td>9</td><td>CD/$\overline{TU}$</td><td>O</td><td>± Power supply control and relay control output.</td></tr>
<tr><td>10</td><td>GND</td><td>–</td><td>Ground</td></tr>
<tr><td>11</td><td>CD ON</td><td>O</td><td>Remote output.</td></tr>
<tr><td>16</td><td>$\overline{RST}$</td><td>I</td><td>Reset signal input. L : reset</td></tr>
<tr><td>17</td><td>STRB</td><td>I</td><td>When this pin is made hagh, internal resister state is shifted to latch.</td></tr>
<tr><td>18</td><td>DATA</td><td>I</td><td>Serial data input pin.</td></tr>
<tr><td>19</td><td>CLK</td><td>I</td><td>Clock input pin. Takes data in at rise.</td></tr>
<tr><td>20</td><td>DD5.6</td><td>I</td><td>Power supply in +5 V.</td></tr>
</table>

Pin No. 3, 6, 7, 8, 12, 13, 14, 15 are not used.

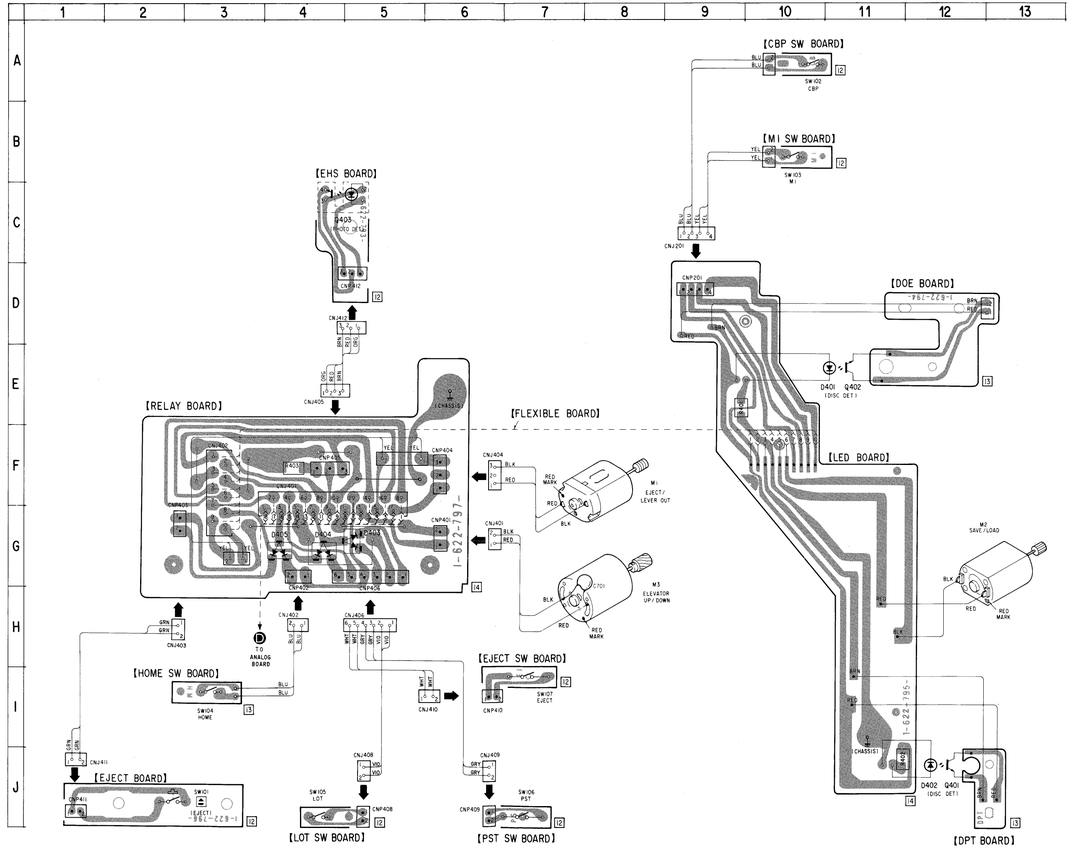
8-2. BLOCK DIAGRAM



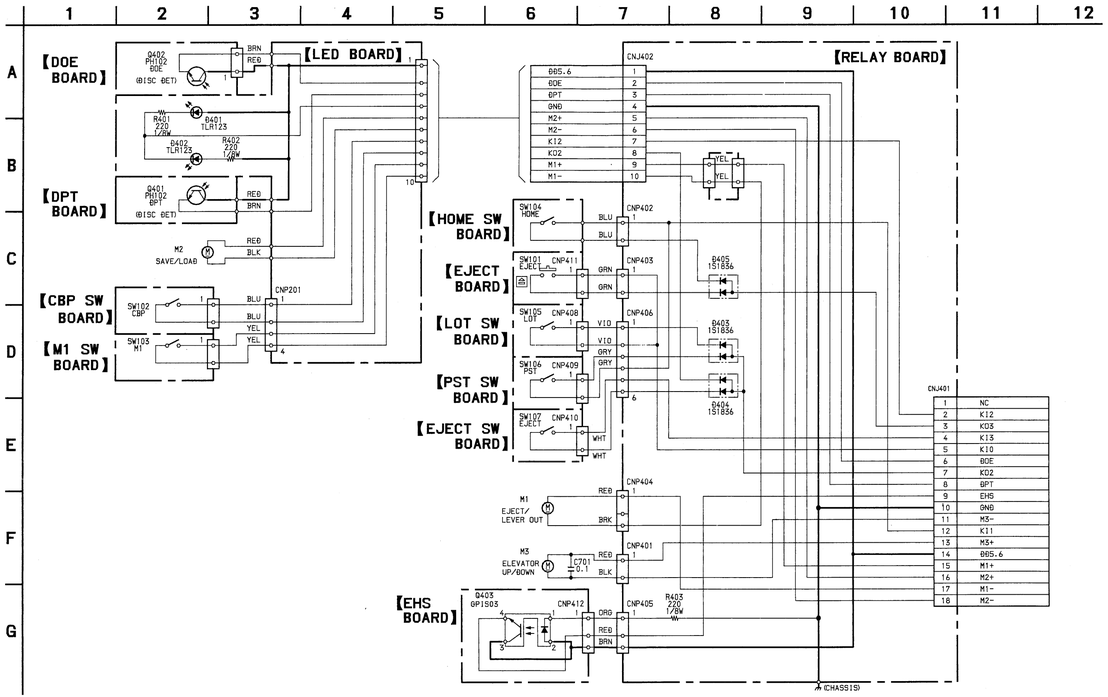
8-3. MD SECTION PRINTED WIRING BOARDS • See page 33 for Note.

• Semiconductor Location

Ref. No.	Location
D401	E-11
D402	J-12
D403	G-5
D404	G-4
D405	G-4
Q401	J-12
Q402	E-11
Q403	C-4



8-4. MD SECTION SCHEMATIC DIAGRAMS • See page 37 for Note.



8-5. ANALOG PRINTED WIRNG BOARD

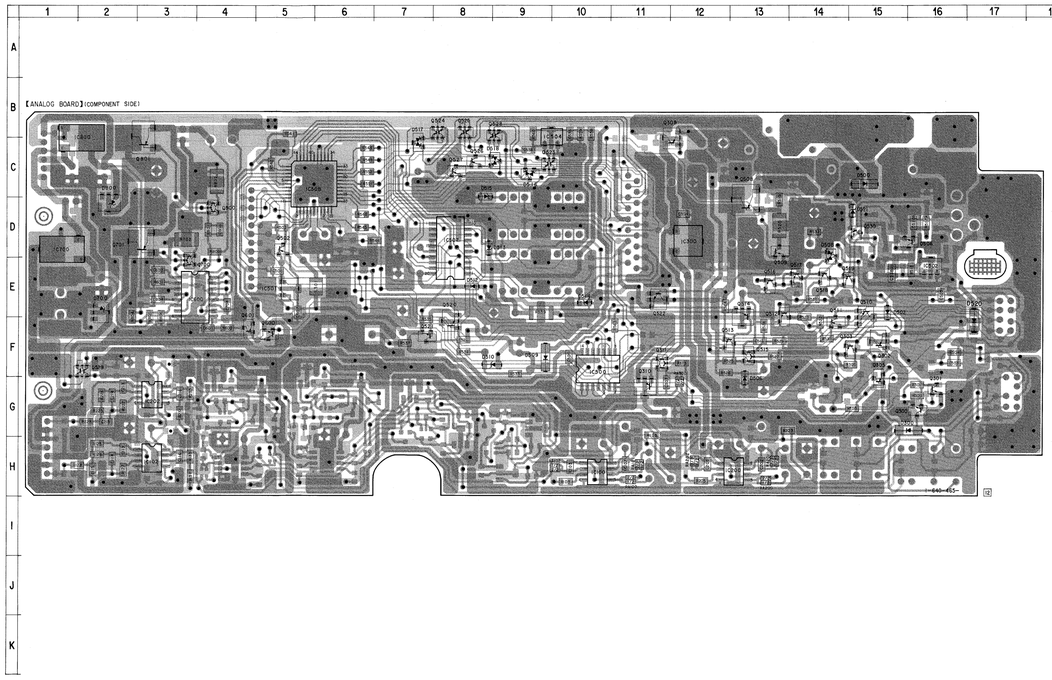
• See page 48 for Semiconductor Lead Layouts.

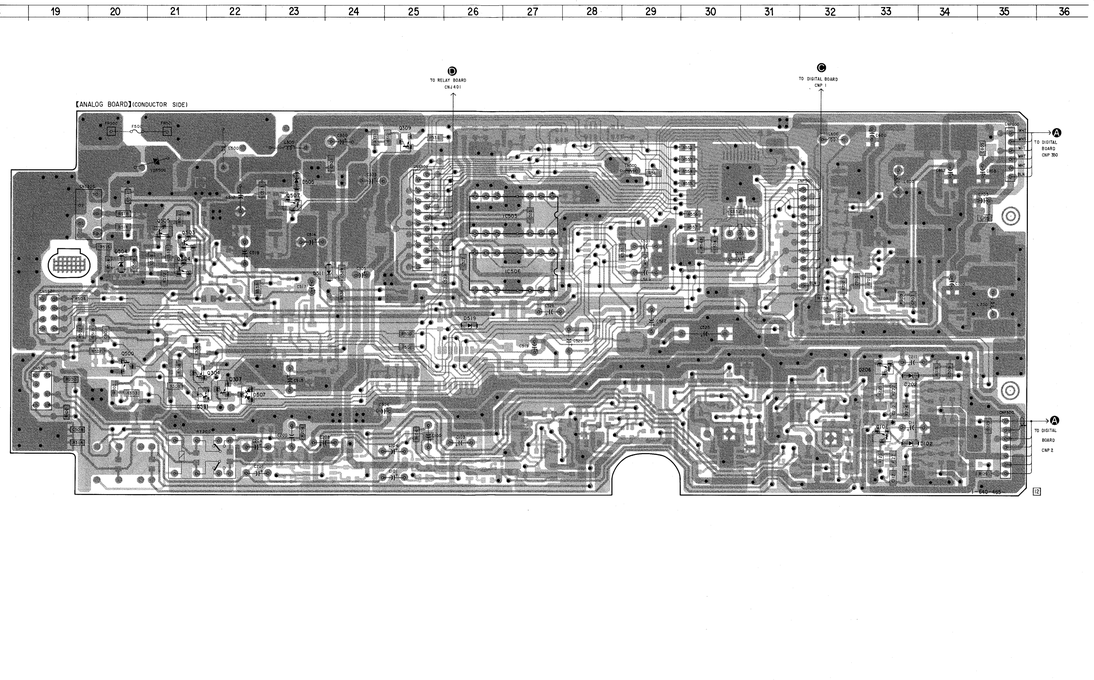
Note:

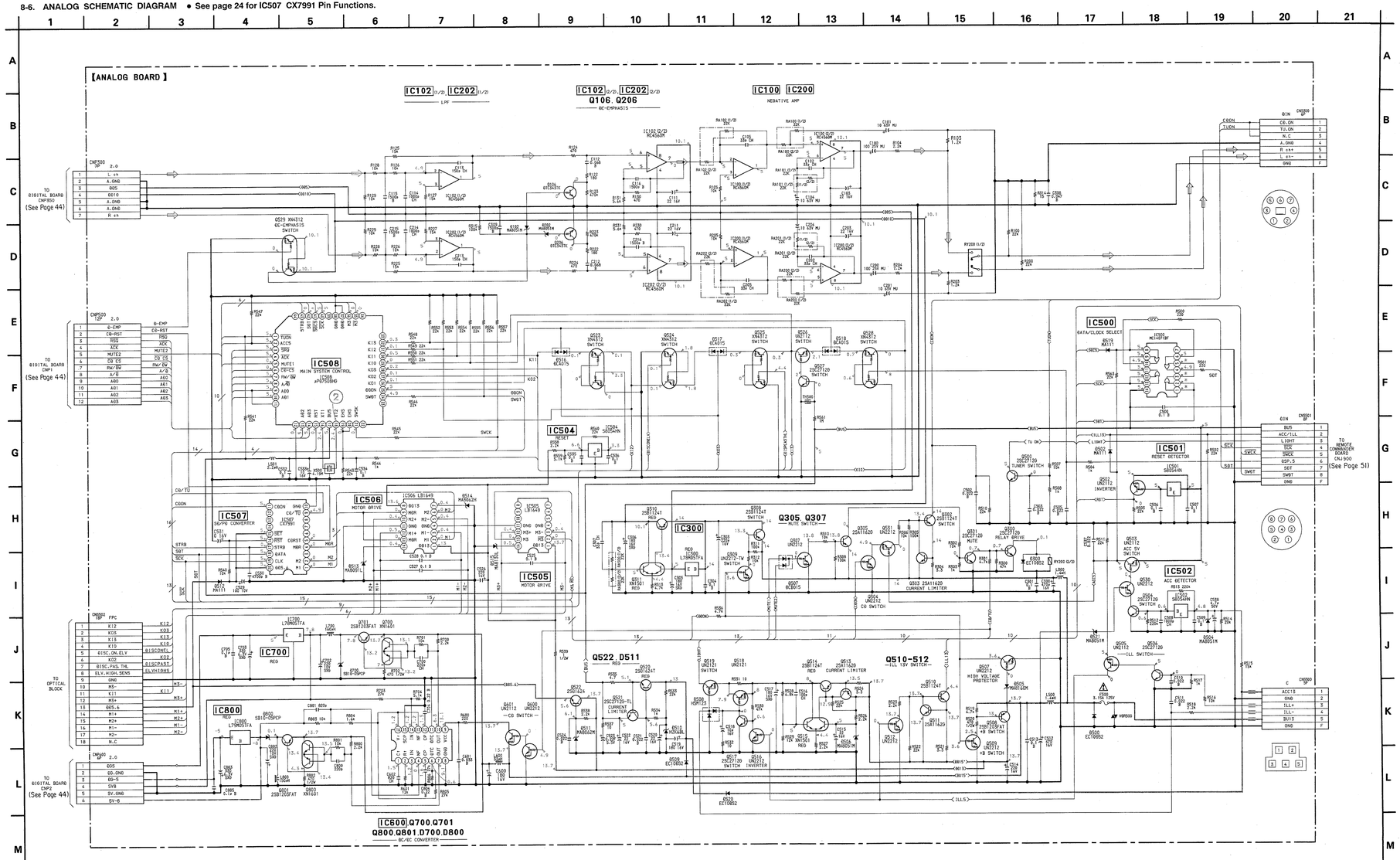
- ○——— : parts extracted from the component side.
- •——— : parts extracted from the conductor side.
- ● : Through hole.
- ▒▒▒ : Pattern on the side which is seen.
- ▒▒▒ : Pattern of the rear side.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D100	G-7	Q200	H-9
D101	G-4	Q201	C-9
D102	H-33	Q202	H-8
D200	G-8	Q203	G-6
D201	G-5	Q204	F-5
D202	G-33	Q205	G-6
D300	G-16	Q206	F-33
D500	C-15	Q300	G-16
D502	E-15	Q301	G-16
D504	E-20	Q302	F-15
D505	C-23	Q303	F-15
D506	G-13	Q304	F-21
D507	G-22	Q305	F-15
D509	F-9	Q307	G-22
D510	F-8	Q308	C-12
D511	E-24	Q309	C-25
D512	E-8	Q310	G-11
D513	D-8	Q311	F-11
D514	E-10	Q500	F-20
D515	C-8	Q502	D-5
D516	C-9	Q503	D-21
D517	C-7	Q504	E-21
D518	C-9	Q505	D-21
D519	F-26	Q506	D-16
D520	E-17	Q507	D-23
D700	E-2	Q508	D-13
D800	D-2	Q509	D-13
		Q510	E-15
IC101	H-4	Q511	F-14
IC102	H-3	Q512	E-13
IC201	H-6	Q513	F-12
IC202	G-3	Q514	E-13
IC300	D-12	Q515	E-13
IC500	F-10	Q516	E-13
IC501	E-5	Q517	E-14
IC502	E-16	Q518	C-9
IC504	B-10	Q520	F-8
IC505	D-27	Q521	F-7
IC506	E-27	Q522	E-11
IC507	D-8	Q523	C-9
IC508	C-5	Q524	B-8
IC625	E-3	Q525	B-8
IC700	D-1	Q526	C-8
IC800	B-2	Q527	C-8
		Q528	B-9
Q100	G-8	Q529	F-2
Q101	G-7	Q600	F-5
Q102	G-7	Q601	F-4
Q103	G-5	Q700	E-3
Q104	G-4	Q701	D-3
Q105	G-4	Q800	D-4
Q106	H-33	Q801	C-3







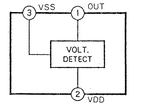
Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

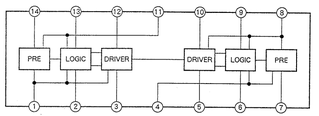
- ▬▬ : B + Line.
- ▬ ▬ : B − Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from CN501.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (10 MΩ/V). Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD
- On voltage measurement, RF board ground should be connected to the chassis ground.

- **IC Block Diagrams**

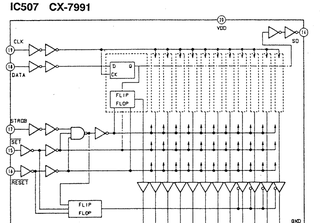
IC501, 502, 504 S-8054HN-CB-S



IC506 LB1649



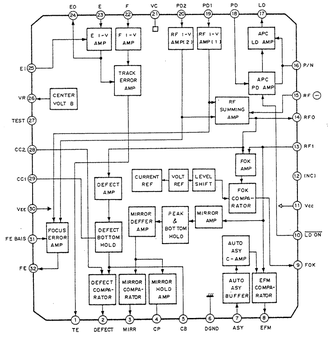
IC507 CX-7991



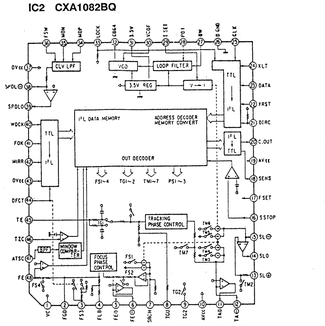
- **WAVEFORM**

② IC508 pin ⑱
1 V/div, 200 nsec/div

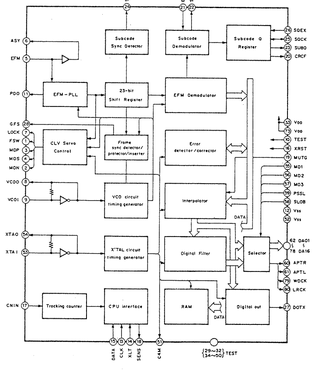
IC1 CXA1081Q



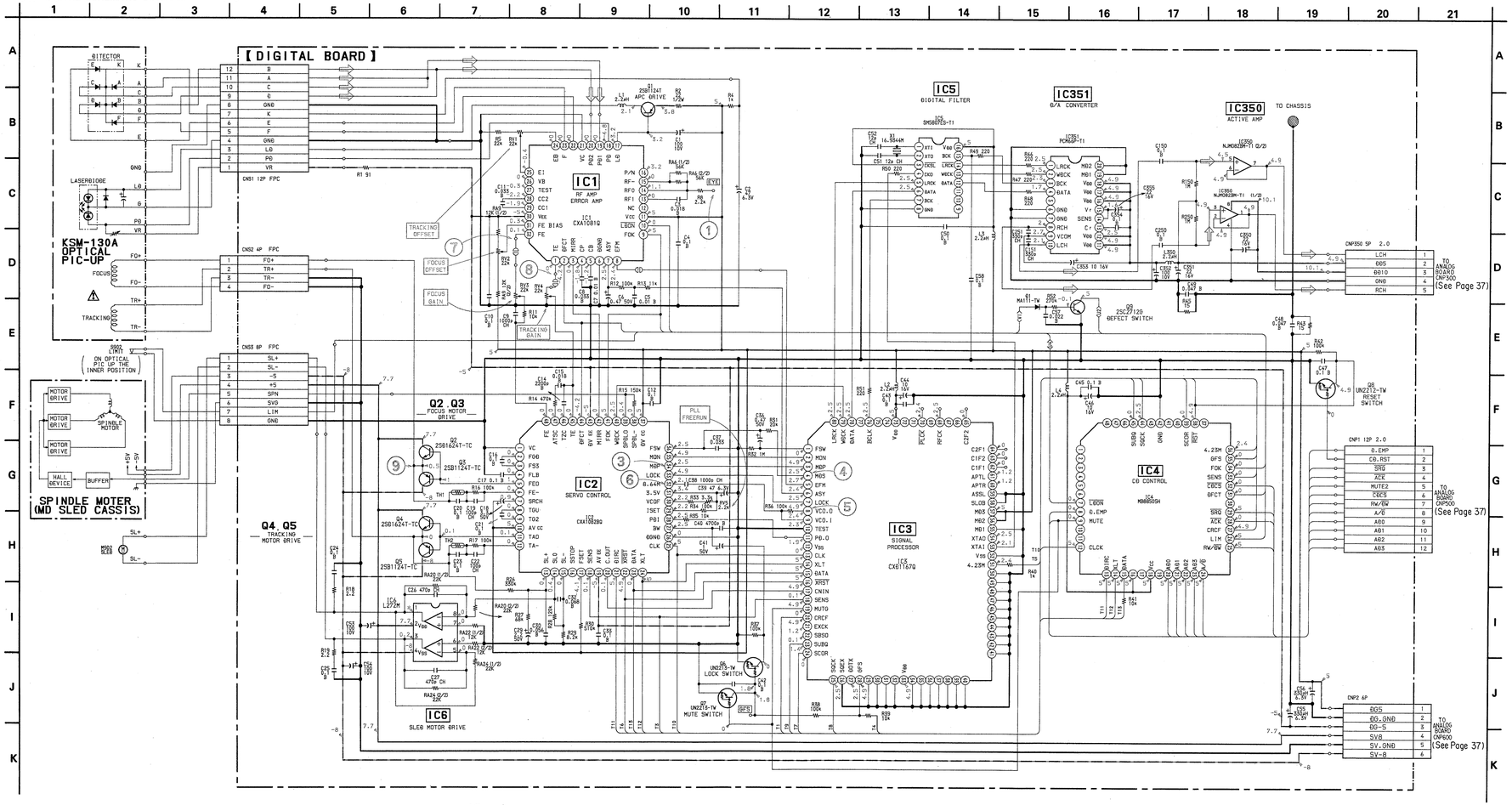
IC2 CXA1082BQ



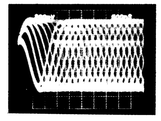
IC3 CXD1167Q



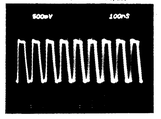
8-7. DIGITAL SCHEMATIC DIAGRAM • See page 37 for Note.



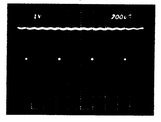
① IC1 Pin ⑭
200 mV/div, 500 nsec/div



② IC2 pin ㉜
500 mV/div, 100 nsec/div

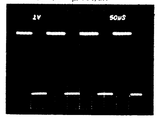


③ IC2 pin ㉙, IC3 pin ③
1 V/div, 200 μsec/div



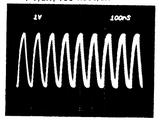
⑦ IC1 pin ㉒
50 mV/div, 2 msec/div

④ IC3 pin ②
1 V/div, 50 μsec/div

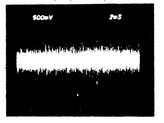


⑤ IC1 pin ①
100 mV/div, 2 msec/div

⑤ IC3 pin ⑨
1 V/div, 100 nsec/div

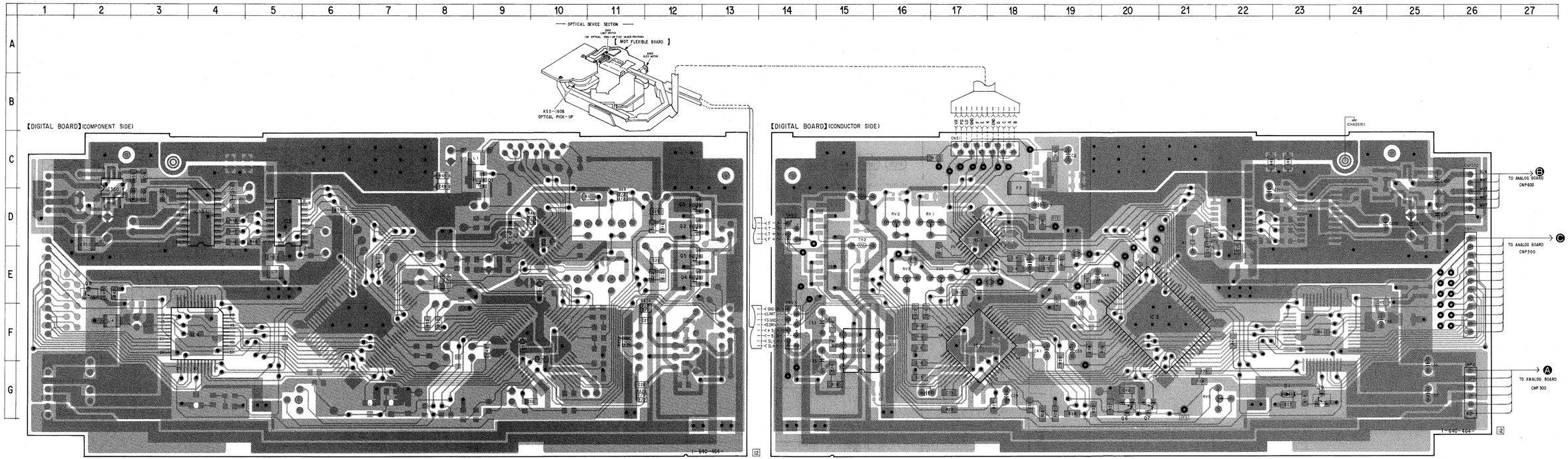


⑤ Q2, 3 emitter
500 mV/div, 2 msec/div



8-8. DIGITAL PRINTED WIRING BOARD

• See page 48 for Semiconductor Lead Layouts.



• **Semiconductor Location**

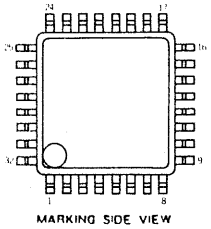
Ref. No.	Location
D1	G-23
IC1	D-17
IC2	F-17
IC3	F-20
IC4	F-4
IC5	D-5
IC6	F-15
IC350	D-2
IC351	D-4
Q1	C-9
Q2	D-12
Q3	D-12
Q4	E-12
Q5	E-12
Q7	G-20
Q6	G-20
Q8	E-2
Q9	G-23

Note:

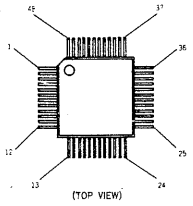
- ○——— : parts extracted from the component side.
- ●——— : parts extracted from the conductor side.
- ● : Through hole.
- ▒▒▒ : Pattern on the side which is seen.
- ▒▒▒ : Pattern of the rear side.

- **Semiconductor Lead Layouts**

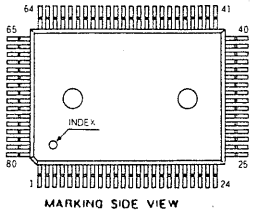
CXA1081Q



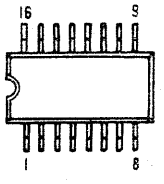
CXA1082BQ
MB88505H-1023M



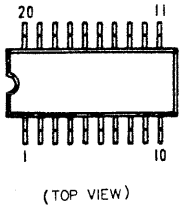
CXD1167Q
μPD75308



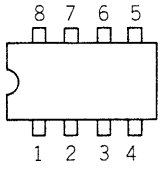
CXD1316DM
MP3775PF



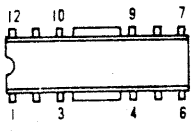
CX-7991



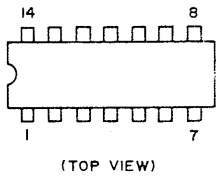
L272M
RC4560M



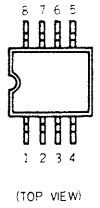
LB1649



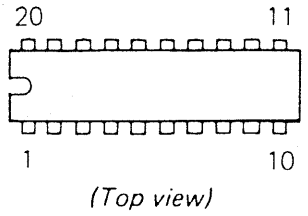
MC14071BF



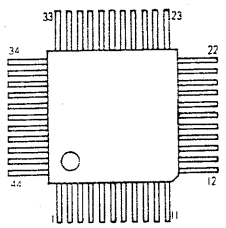
NJM082BM



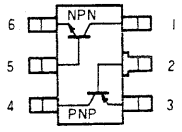
PCM-66P



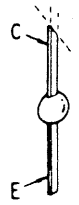
μPD7508HG-657-22



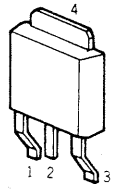
XN4312



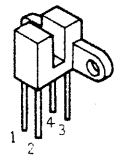
PH102



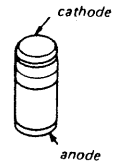
2SB1203FAT



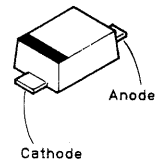
GP-1S03



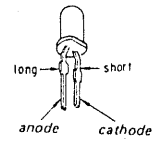
HZK6BL



MAB160M
MA111
MA8051-M
MA8091-L
MA8130L

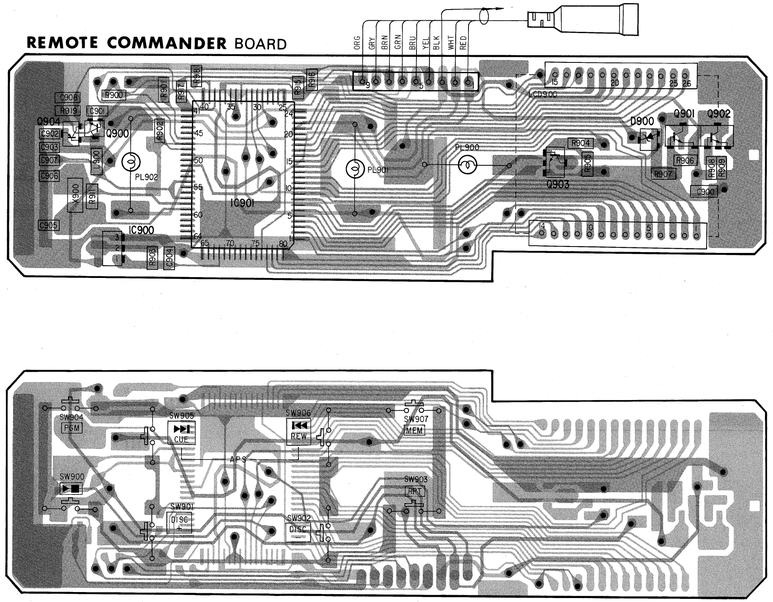


TLR123

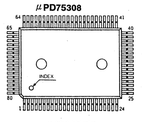


8-9. REMOTE COMMANDER SECTION PRINTED WIRING BOARD • See page 48 for Semiconductor Lead Layouts.

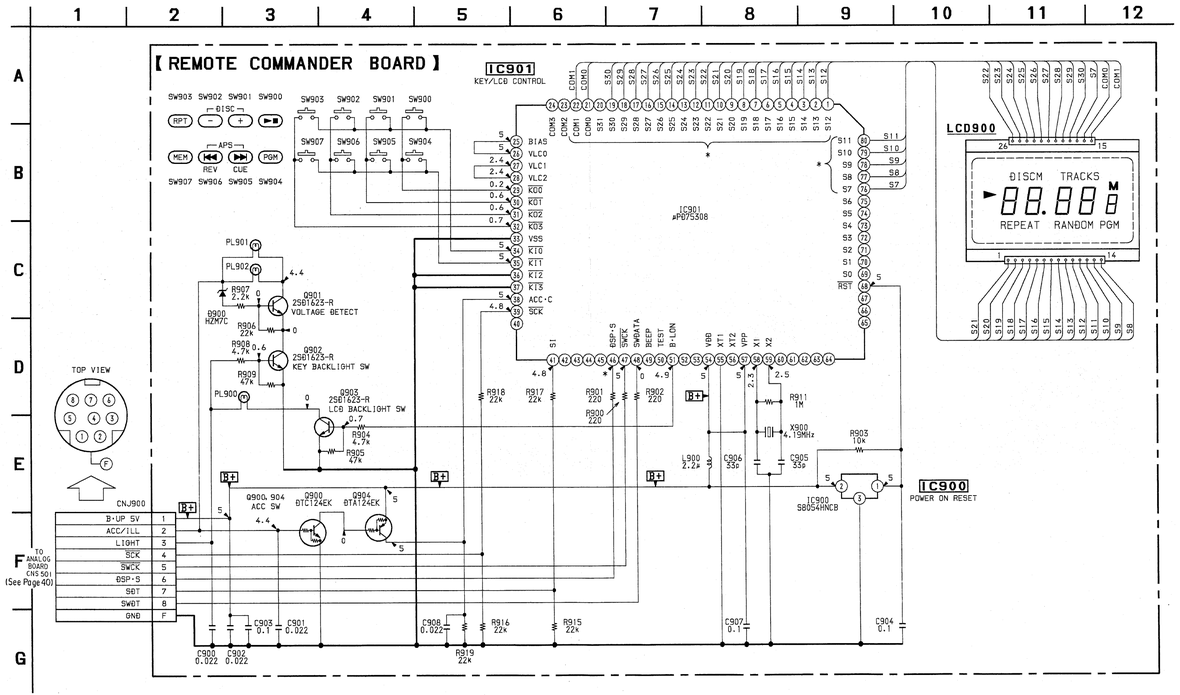
Note:
- ○——○ : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.



• Semiconductor Lead Layouts



8-10. REMOTE COMMANDER SECTION SCHEMATIC DIAGRAM



Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- B+ : B+ Line.
- Power voltage is fed with CD changer from CNJ900.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (10 MΩ/V). Voltage variations may be noted due to normal production tolerances.

SECTION 9
EXPLODED VIEWS

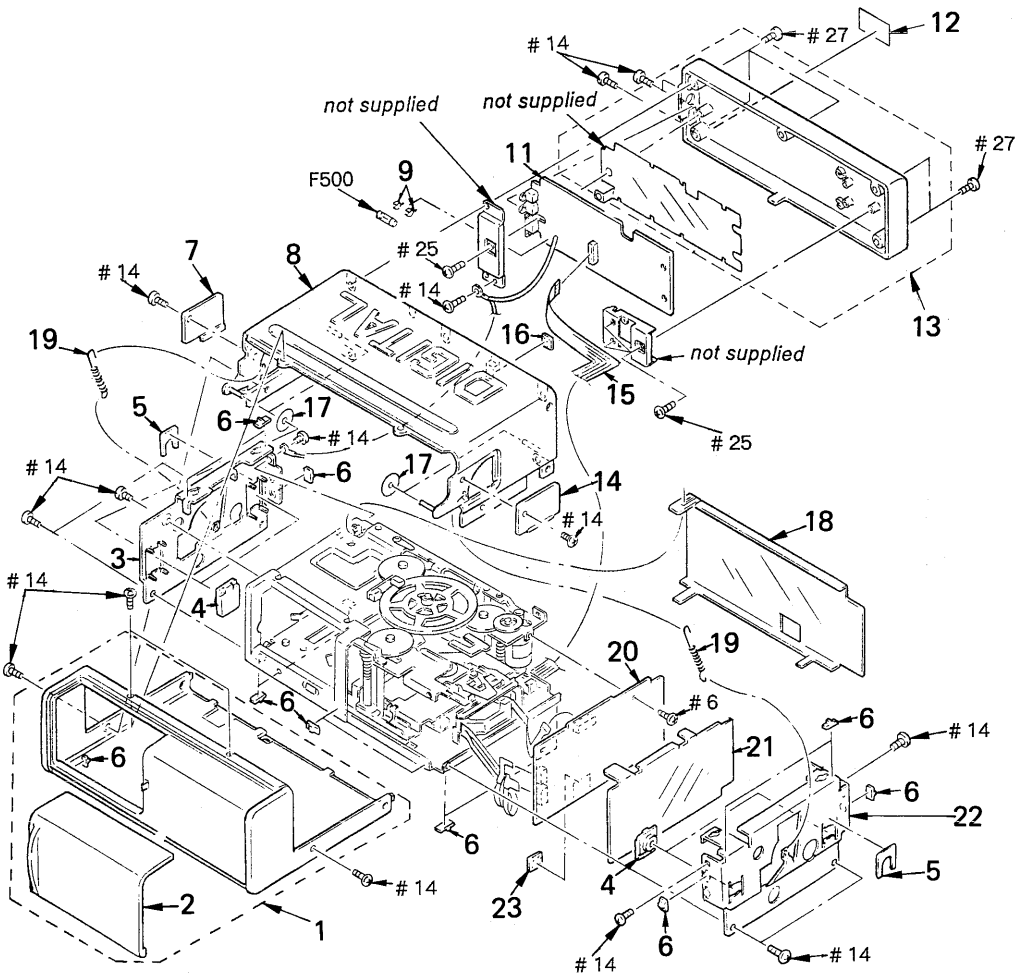
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

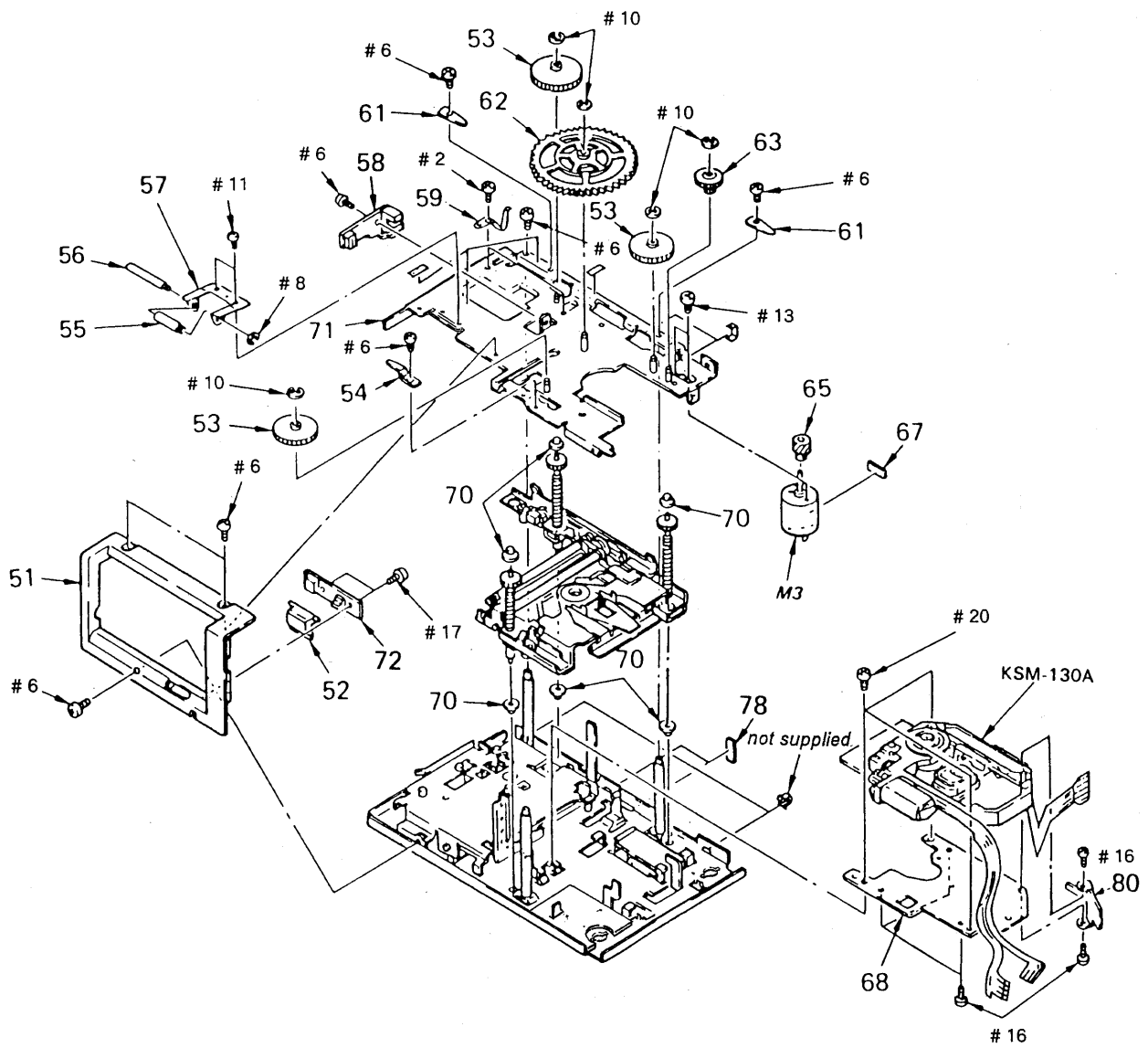
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

(1)



Ref. No.	Part No.	Description	Remark
1	X-3363-803-1	PANEL ASSY, FRONT	
2	3-333-077-51	DOOR, FRONT	
3	* X-3320-598-1	BRACKET ASSY (LEFT)	
4	3-348-583-01	DAMPER (OIL)	
5	* 3-354-701-01	SPACER	
6	3-348-750-01	CUSHION (DAMPER)	
7	3-333-069-81	COVER (LEFT), SIDE	
8	X-3363-802-1	CASE ASSY, UPPER	
9	* 1-533-213-31	HOLDER, FUSE	
11	A-3273-587-A	MOUNTED PCB, ANALOG	
12	* 3-372-008-01	LABEL, MODEL NUMBER (NISSAN)	
13		CASE ASSY, REAR	
14	3-333-070-81	COVER (RIGHT), SIDE	
15	1-630-435-11	PC BOARD, TRANSLATION FLEXIBLE	
16	3-831-441-11	SHEET, PROTECTION	
17	3-348-749-01	WASHER (TEFLON)	
18	* 3-333-066-01	SHEET (LARGE), INSULATING	
19	3-348-584-01	SPRING (FLOATING), TENSION	
20	* A-3273-593-A	MOUNTED PCB, DIGITAL	
21	* 3-333-073-01	SHEET (SMALL), INSULATING	
22	* X-3320-599-1	BRACKET ASSY (RIGHT)	
23	3-343-738-01	CUSHION, RF	
F500	⚠ 1-532-745-11	FUSE 3.15A 125V	

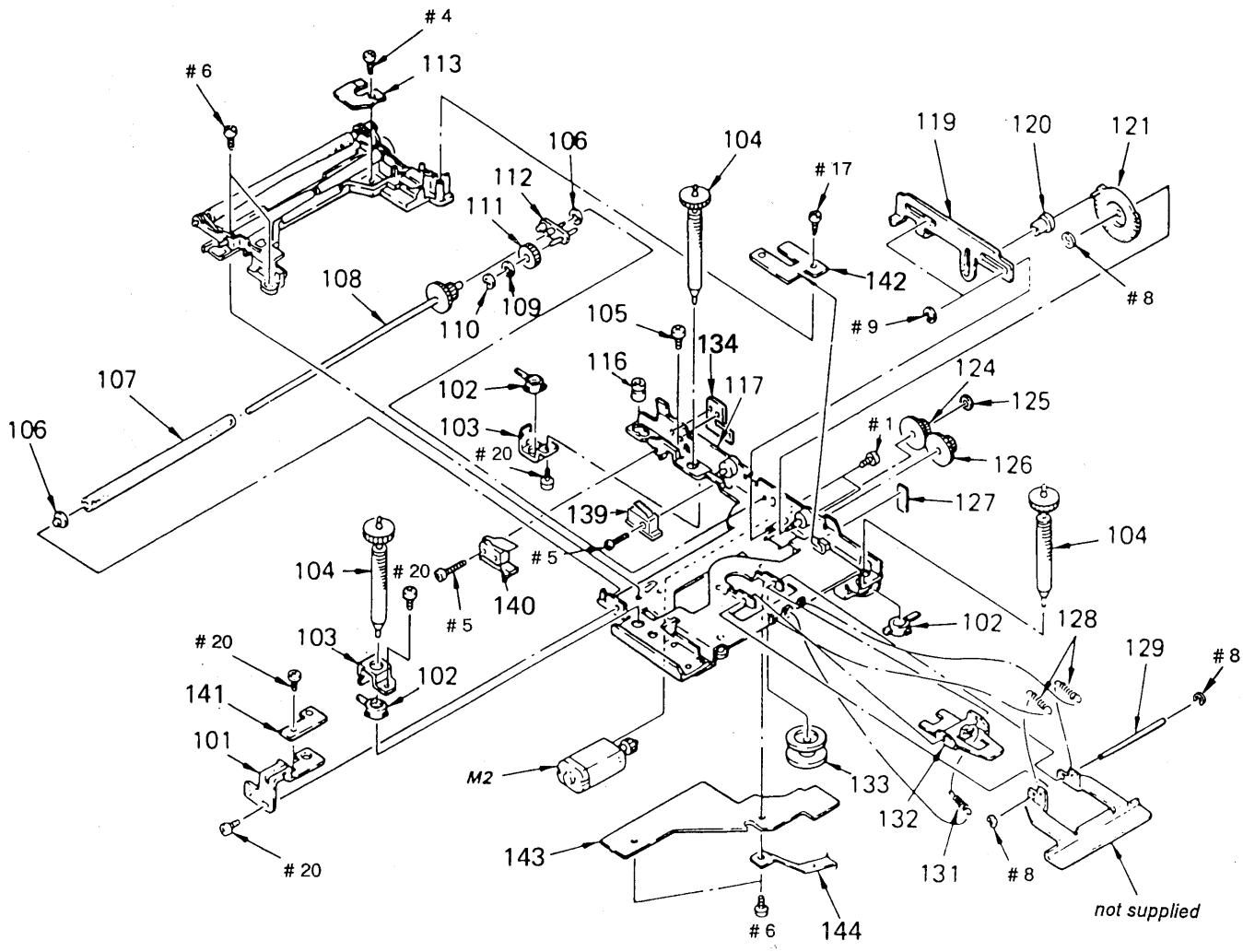
(2)



Ref. No.	Part No.	Description	Remark
51	3-369-019-31	ESCUTCHEON	
52	3-343-712-01	BUTTON, EJECT	
53	3-331-916-01	GEAR (MIDDLE), ELEVATOR	
54	* 3-333-082-01	RETAINER, SCREW, FEED	
55	3-343-708-01	ROLLER, MAGAZINE	
56	* 3-343-711-01	SHAFT, ROLLER, MAGAZINE	
57	3-343-710-11	SPRING	
58	* 1-622-793-11	EHS BOARD	
59	3-343-709-01	SPRING	
61	3-331-907-01	RETAINER, SCREW, FEED	
62	3-331-952-01	GEAR (LARGE), ELEVATOR	

Ref. No.	Part No.	Description	Remark
63	3-343-707-01	GEAR (SMALL), ELEVATOR	
65	3-363-927-01	GEAR (MOTOR)	
67	3-831-441-11	SHEET, PROTECTION	
68	* 3-343-714-01	BRACKET, FOP	
70	3-333-081-01	BEARING (UPPER & LOWER)	
71	* X-3329-567-1	PLATE ASSY, TOP	
72	* 1-622-796-11	EJECT BOARD	
78	3-568-749-00	CUSHION, ECM	
80	* 3-343-741-01	PLATE, GROUND	
M3	1-541-309-11	MOTOR, L (RF-370C) (ELEVATOR UP/DOWN)	

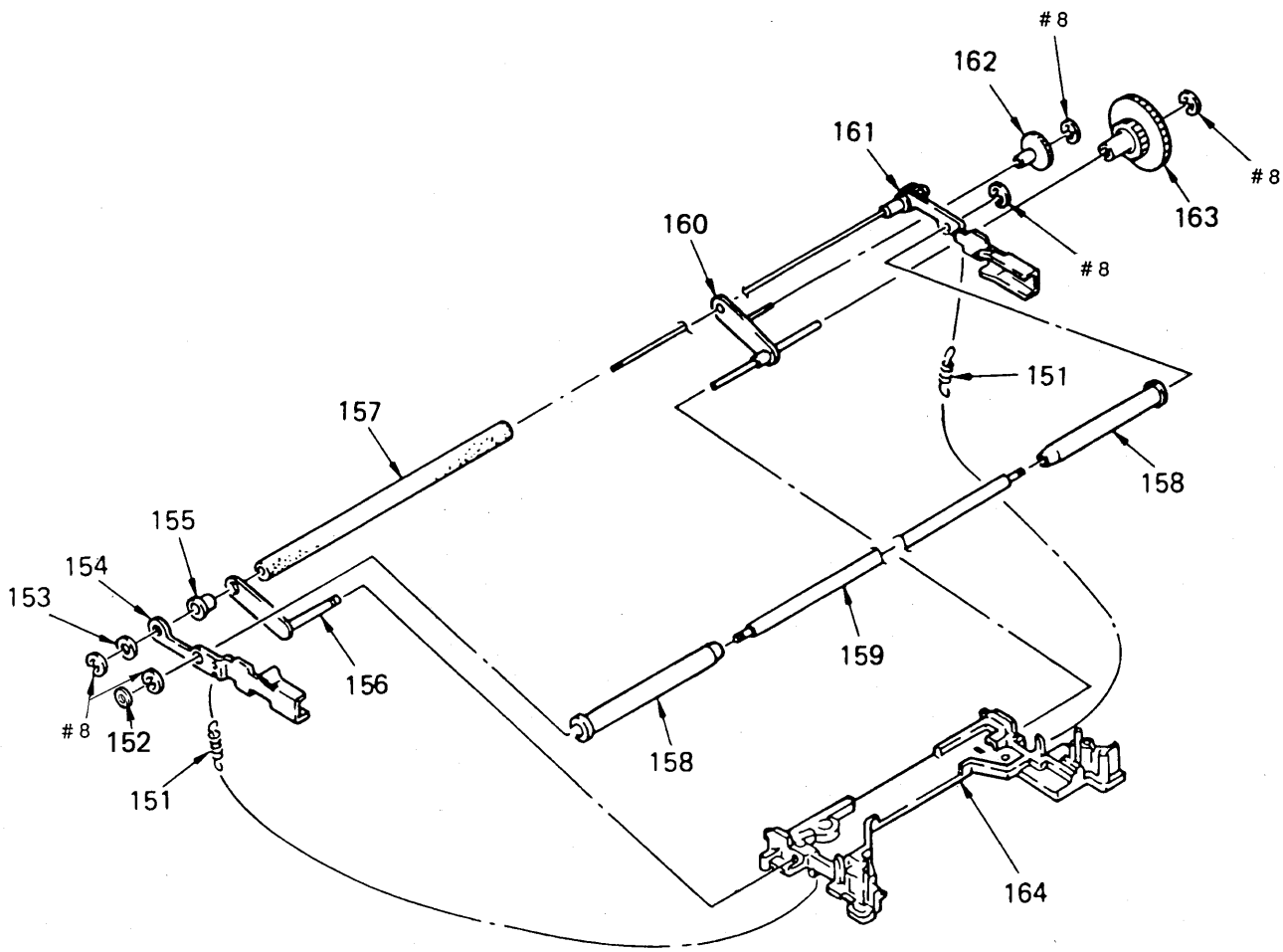
(3)



Ref. No.	Part No.	Description	Remark
101	* 3-333-092-01	BRACKET (S), PHOTO	
102	3-329-560-01	SCREW, M6	
103	* 3-329-570-01	PLATE, SCREW	
104	X-3329-554-1	SCREW ASSY, FEED	
106	3-329-558-01	BEARING, MAIN ROLLER	
107	3-323-231-02	ROLLER (LOWER)	
108	X-3329-520-1	SHAFT (LOWER) ASSY, ROLLER	
109	3-329-553-01	SPRING, E	
110	3-321-813-11	WASHER, COTTER POLYETHYLENE	
111	3-329-555-11	GEAR (E), R	
112	* X-3329-522-1	LEVER ASSY, R	
113	* 3-333-006-01	REINFORCEMENT	
116	3-329-551-01	METAL (B), SHAFT	
117	* X-3329-565-1	CHASSIS ASSY, E	
119	* 3-331-944-01	LEVER, SLIDE	
120	3-329-547-01	ROLLER, IDLE	
121	3-331-943-01	GEAR (F), R	

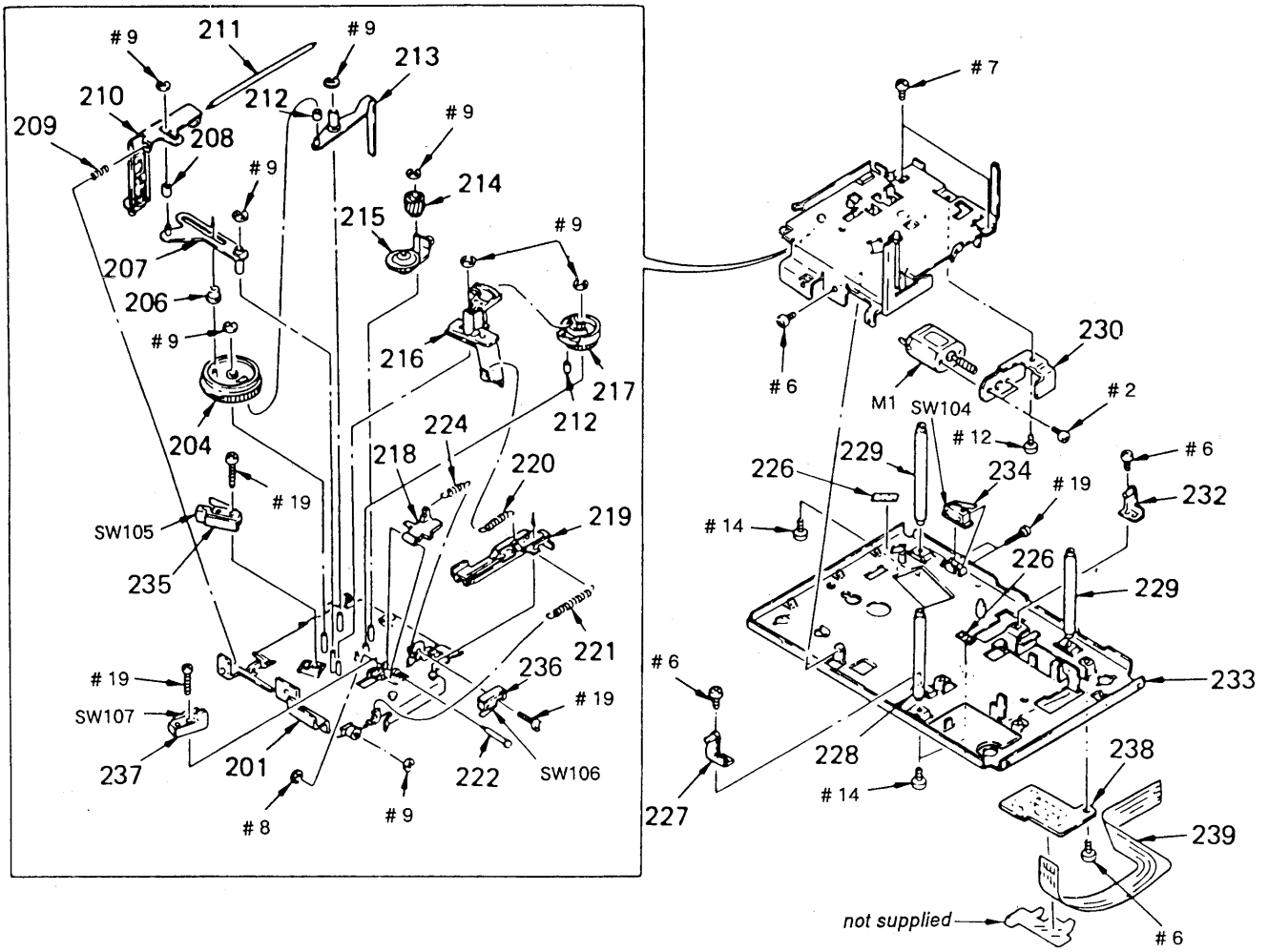
Ref. No.	Part No.	Description	Remark
124	3-333-099-01	GEAR (A)	
125	3-895-818-01	WASHER, POLYETHYLENE, COTTER	
126	3-343-701-01	GEAR (B)	
127	3-831-441-11	SHEET, PROTECTION	
128	3-571-823-00	SPRING, TENSION	
129	3-333-098-01	SHAFT, DISK CHUCK	
131	3-535-369-XX	SPRING, TENSION	
132	3-343-718-01	BRACKET, DISK CHUCK	
133	3-343-717-01	PLATE (M), CHUCK	
134	* 3-348-736-01	RETAINER, ACTUATOR	
139	* 1-622-790-11	M1 SW BOARD	
140	* 1-622-791-11	CB SW BOARD	
141	* 1-622-792-11	PC BOARD, DPT	
142	* 1-622-794-11	DOE BOARD	
143	* 1-622-795-11	LED BOARD	
144	1-634-606-11	PC BOARD, FLEXIBLE	
M2	X-3329-560-1	MOTOR ASSY, M2 (SAVE/LOAD)	

(4)



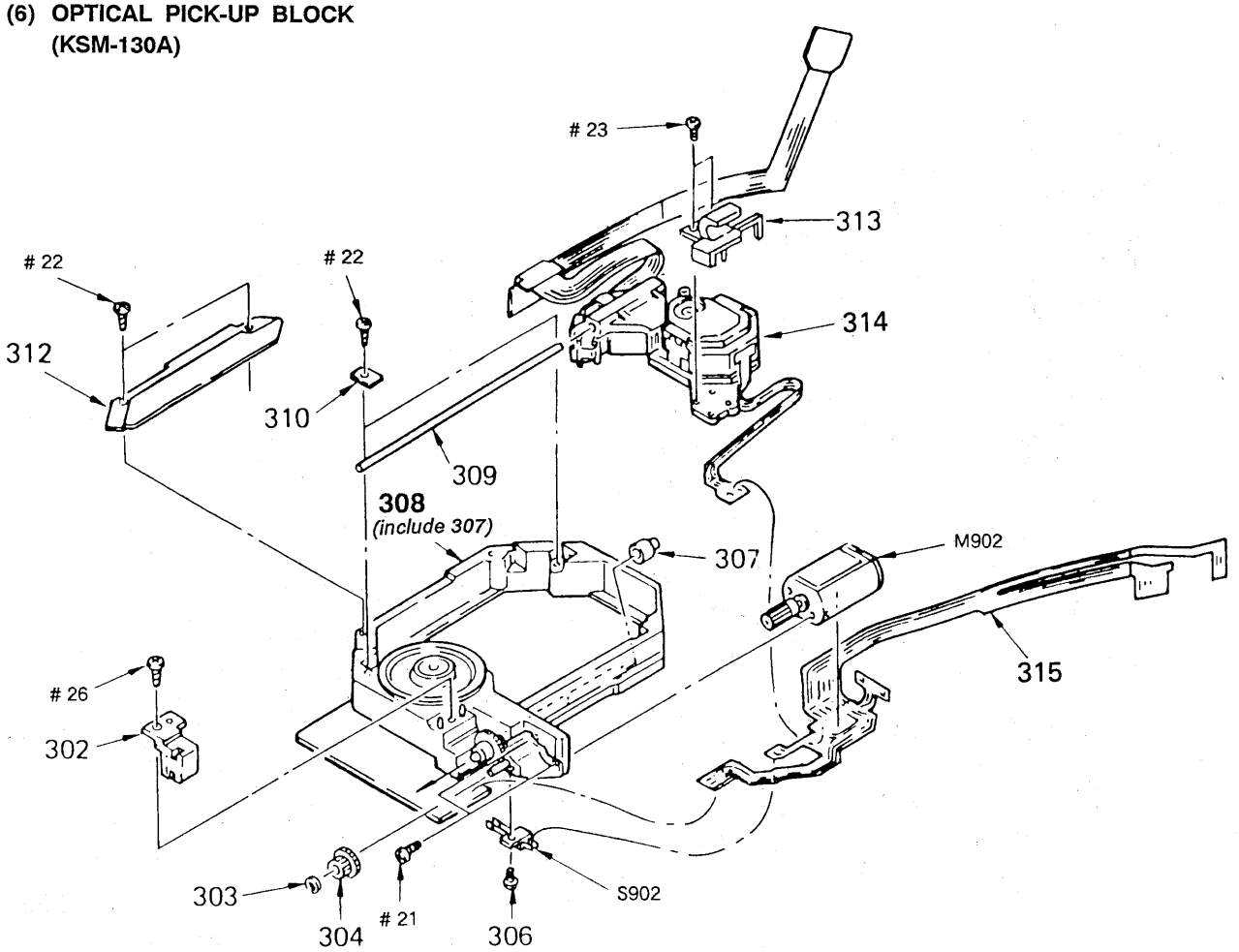
Ref. No.	Part No.	Description	Remark
151	3-547-665-11	SPRING, TENSION	
152	3-895-818-01	WASHER, POLYETHYLENE, COTTER	
153	3-310-958-00	WASHER (R)	
154	3-343-706-01	LINK, DISK	
155	* 3-331-925-01	BEARING, ROLLER STOPPER	
156	* X-3329-517-1	LEVER (F) ASSY, LINK	
157	3-323-231-02	ROLLER (LOWER)	
158	X-3329-518-1	ROLLER (UPPER) ASSY	
159	* 3-329-552-01	SHAFT, SIDE ROLLER	
160	* X-3329-516-1	LEVER (B) ASSY, LINK	
161	X-3329-561-1	SHAFT (UPPER) ASSY, ROLLER	
162	3-331-924-01	GEAR (G), ROLLER	
163	3-331-914-01	GEAR, ROLLER 3 STEP	
164	3-331-957-06	GUIDE, DISK	

(5)



Ref. No.	Part No.	Description	Remark
201	* X-3323-201-1	CHASSIS ASSY, PACK	
204	X-3329-513-1	GEAR ASSY, CAM	
206	3-331-905-01	ROLLER (A)	
207	* X-3329-507-1	LEVER ASSY, LINEAR	
208	3-331-927-01	ROLLER, LINEAR LEVER	
209	3-568-315-01	SPRING, COMPRESSION	
210	X-3329-558-1	SLIDER ASSY, LINEAR	
211	3-331-904-01	SHAFT, LINEAR SLIDER	
212	3-329-580-01	ROLLER, CAM	
213	* X-3329-510-1	LEVER ASSY, SLIDER SET	
214	3-333-088-01	WHEEL, WORM	
215	X-3329-557-1	GEAR ASSY	
216	X-3329-511-1	LEVER ASSY, SOFT EJECT	
217	3-331-951-01	GEAR (2), EJECT CAM	
218	3-333-087-01	HOOK, BACK LOCK	
219	* 3-331-913-01	EJECTOR (2), SOFT	
220	3-343-723-01	SPRING, TENSION	
221	3-634-191-XX	SPRING, TENSION	
222	* 3-329-573-01	SHAFT, LOCK HOOK	
224	3-535-369-XX	SPRING, TENSION	
226	3-831-441-11	SHEET, PROTECTION	
227	* X-3329-555-1	OPENER ASSY (A)	
228	* 3-333-084-01	SHAFT (B), FIXED, E	
229	* 3-333-083-01	SHAFT (A), FIXED, E	
230	* 3-343-715-01	PLATE, FIXED, MOTOR	
232	* X-3329-556-1	OPENER ASSY (B)	
233	* X-3329-568-1	CHASSIS ASSY, BOTTOM	
234	* 1-617-987-12	HOME SW BOARD	
235	* 1-622-787-11	LOT SW BOARD	
236	* 1-622-788-11	LOT SW BOARD	
237	* 1-622-789-11	EJECT SW BOARD	
238	* 1-622-797-11	RELAY BOARD	
239	1-630-435-11	MD FLEXIBLE BOARD	
M1	X-3329-571-1	MOTOR ASSY (EJECT/LEVER OUT)	
SW104	1-570-504-11	SWITCH, MICRO (HOME)	
SW105	1-570-504-11	SWITCH, MICRO (LOT)	
SW106	1-570-504-11	SWITCH, MICRO (PST)	
SW107	1-570-504-11	SWITCH, MICRO (EJECT)	

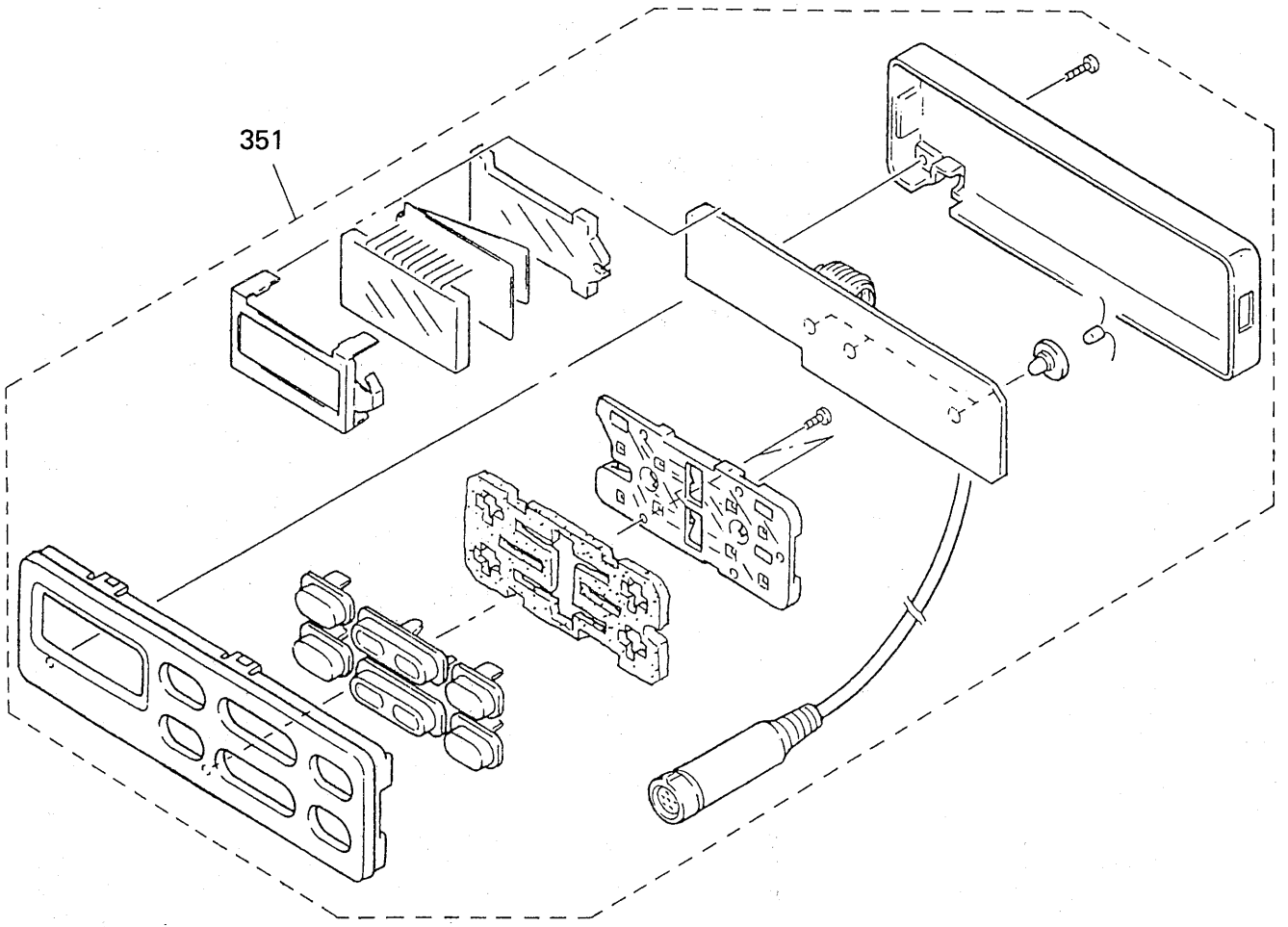
(6) OPTICAL PICK-UP BLOCK (KSM-130A)



Ref. No.	Part No.	Description	Remark
302	X-2640-611-1	RETAINER ASSY, THRUST	
303	3-321-813-01	WASHER, COTTER POLYETHYLENE	
304	2-640-625-02	GEAR (B)	
306	2-640-620-03	SCREW (B) (1.4X3), TAPPING	
307	2-640-629-03	RETAINER (C), THRUST	
309	2-640-632-01	SHAFT, GUIDE	
310	2-640-645-01	RETAINER, GUIDE SHAFT	
312	2-640-623-01	COVER, MD	
313	2-640-654-03	GUIDE (D), FEED	
314	⚠ 8-848-067-01	PICKUP, OPTICS KSS-160B	
315	1-621-406-11	PC BOARD, MOT FLEXIBLE	
M902	X-3320-568-1	GEAR ASSY, SLED MOTOR	
S902	1-554-938-11	SWITCH, LEAF	

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

(7) REMOTE COMMANDER UNIT



Ref. No.	Part No.	Description	Remark
351	1-465-850-11	REMOTE COMMANDER	

ANALOG

SECTION 10
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

When including parts by reference number, please include the board name.

Ref. No.	Part No.	Description			Remark
	* A-3273-587-A	MOUNTED PCB, ANALOG			
		**********			
		〈 CAPACITOR 〉			
C100	1-126-023-11	ELECT	100uF	20%	25V
C101	1-126-059-11	ELECT	10uF	20%	63V
C102	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C103	1-124-234-00	ELECT	22uF	20%	16V
C104	1-126-059-11	ELECT	10uF	20%	63V
C105	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C111	1-124-234-00	ELECT	22uF	20%	16V
C112	1-163-833-00	CERAMIC CHIP	0.068uF		25V
C113	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C114	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C115	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C116	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C200	1-126-023-11	ELECT	100uF	20%	25V
C201	1-126-059-11	ELECT	10uF	20%	63V
C202	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C203	1-124-234-00	ELECT	22uF	20%	16V
C204	1-126-059-11	ELECT	10uF	20%	63V
C205	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C211	1-124-234-00	ELECT	22uF	20%	16V
C212	1-163-833-00	CERAMIC CHIP	0.068uF		25V
C213	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C214	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C215	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C216	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C301	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C303	1-124-570-11	ELECT	220uF	20%	16V
C304	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C305	1-128-299-11	ELECT	180uF	20%	16V
C306	1-128-299-11	ELECT	180uF	20%	16V
C307	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C308	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C309	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C500	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C502	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C503	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C505	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C506	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C507	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C508	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C509	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C510	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C511	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C513	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C514	1-124-570-11	ELECT	220uF	20%	16V
C515	1-124-234-00	ELECT	22uF	20%	16V
C516	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C517	1-128-299-11	ELECT	180uF	20%	16V
C518	1-126-157-11	ELECT	10uF	20%	16V
C519	1-128-299-11	ELECT	180uF	20%	16V
C520	1-124-234-00	ELECT	22uF	20%	16V
C521	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C522	1-124-234-00	ELECT	22uF	20%	16V
C523	1-125-486-11	DUBLE LAYERS	0.22F		5.5V
C524	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C525	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C526	1-124-570-11	ELECT	220uF	20%	16V
C527	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C528	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C529	1-124-584-00	ELECT	100uF	20%	10V
C530	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C531	1-126-157-11	ELECT	10uF	20%	16V
C532	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C533	1-126-157-11	ELECT	10uF	20%	16V
C534	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C535	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C536	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C537	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C538	1-135-210-11	ELECT	4.7uF	20%	10V
C600	1-128-299-11	ELECT	180uF	20%	16V
C601	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C602	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C700	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C702	1-128-292-11	ELECT	220uF	20%	10V
C703	1-128-285-11	ELECT	330uF	20%	6.3V

Ref. No.	Part No.	Description			Remark
C704	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C705	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C800	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C801	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C802	1-128-292-11	ELECT	220uF	20%	10V
C803	1-128-285-11	ELECT	330uF	20%	6.3V
C804	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C805	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		〈 CONNECTOR 〉			
CNP300 *	1-506-989-11	PIN, CONNECTOR (PC BOARD) 7P			
CNP500 *	1-506-994-11	PIN, CONNECTOR (PC BOARD) 12P			
CNP600 *	1-506-988-11	PIN, CONNECTOR (PC BOARD) 6P			
CNS300	1-580-394-11	CONNECTOR, DIN 6P			
CNS501	1-580-489-11	SOCKET, CONNECTOR 8P			
		〈 DIODE 〉			
D102	8-719-420-90	DIODE	MA8051-M		
D202	8-719-420-90	DIODE	MA8051-M		
D300	8-719-210-33	DIODE	EC10DS2		
D500	8-719-210-33	DIODE	EC10DS2		
D502	8-719-404-49	DIODE	MA111		
D504	8-719-420-90	DIODE	MA8051-M		
D505	8-719-022-90	DIODE	MA8160M		
D506	8-719-420-90	DIODE	MA8051-M		
D507	8-719-400-18	DIODE	MA152WK		
D508	8-719-971-05	DIODE	HSM123		
D509	8-719-210-33	DIODE	EC10DS2		
D510	8-719-972-14	DIODE	HZK6BL		
D511	8-719-422-67	DIODE	MA8062-H		
D512	8-719-404-49	DIODE	MA111		
D513	8-719-422-94	DIODE	MA8091-L		
D514	8-719-422-67	DIODE	MA8062-H		
D515	8-719-022-89	DIODE	MA8130L		
D516	8-719-104-34	DIODE	1S2836		
D517	8-719-104-34	DIODE	1S2836		
D518	8-719-104-34	DIODE	1S2836		
D519	8-719-404-49	DIODE	MA111		
D520	8-719-200-82	DIODE	11ES2		
D521	8-719-420-90	DIODE	MA8051-M		
D700	8-719-938-78	DIODE	SB10-05PCP		
D800	8-719-938-78	DIODE	SB10-05PCP		
		〈 FUSE HOLDER 〉			
FH500 *	1-533-213-31	HOLDER, FUSE			
FH501 *	1-533-213-31	HOLDER, FUSE			
		〈 IC 〉			
IC100	8-759-981-99	IC	RC4560M		
IC102	8-759-981-99	IC	RC4560M		
IC200	8-759-981-99	IC	RC4560M		
IC202	8-759-981-99	IC	RC4560M		

Ref. No.	Part No.	Description		Remark
IC300	8-759-052-52	IC	L78M05T-FA	
IC500	8-759-009-12	IC	MC14071BF	
IC501	8-759-940-45	IC	S-8054HN-CB	
IC502	8-759-940-45	IC	S-8054HN-CB	
IC504	8-759-940-45	IC	S-8054HN-CB	
IC505	8-759-802-32	IC	LB1649	
IC506	8-759-802-32	IC	LB1649	
IC507	8-757-991-00	IC	CX7991	
IC508	8-759-146-20	IC	uPD7508HG-657-22	
IC600	8-759-945-17	IC	MB3775PF	
IC700	8-759-052-52	IC	L78M05T-FA	
IC800	8-759-822-95	IC	L79M05T-FA	
		〈 COIL 〉		
L300 *	1-424-507-11	COIL, CHOKE 1.4mH		
L500 *	1-424-507-11	COIL, CHOKE 1.4mH		
L501	1-410-373-31	INDUCTOR CHIP 2.2uH		
L600	1-414-002-11	COIL, CHOKE 33uH		
L700	1-414-003-11	COIL, CHOKE 150uH		
L800	1-414-003-11	COIL, CHOKE 150uH		
		〈 TRANSISTOR 〉		
Q106	8-729-920-31	TRANSISTOR	DTC343TK	
Q206	8-729-920-31	TRANSISTOR	DTC343TK	
Q300	8-729-230-49	TRANSISTOR	2SC2712-YG	
Q301	8-729-230-49	TRANSISTOR	2SC2712-YG	
Q302	8-729-820-61	TRANSISTOR	2SB1124-T	
Q303	8-729-216-22	TRANSISTOR	2SA1162	
Q304	8-729-424-59	TRANSISTOR	UN2212	
Q305	8-729-216-22	TRANSISTOR	2SA1162	
Q307	8-729-424-59	TRANSISTOR	UN2212	
Q308	8-729-820-61	TRANSISTOR	2SB1124-T	
Q309	8-729-424-59	TRANSISTOR	UN2212	
Q310	8-729-820-61	TRANSISTOR	2SB1124-T	
Q311	8-729-421-23	TRANSISTOR	XN1216	
Q500	8-729-230-49	TRANSISTOR	2SC2712-YG	
Q502	8-729-424-12	TRANSISTOR	UN2112	
Q503	8-729-424-12	TRANSISTOR	UN2112	
Q504	8-729-230-49	TRANSISTOR	2SC2712-YG	
Q505	8-729-424-12	TRANSISTOR	UN2112	
Q506	8-729-230-49	TRANSISTOR	2SC2712-YG	
Q507	8-729-424-59	TRANSISTOR	UN2212	
Q508	8-729-821-63	TRANSISTOR	2SB1203FAT-TM	
Q509	8-729-424-59	TRANSISTOR	UN2212	
Q510	8-729-820-61	TRANSISTOR	2SB1124-T	
Q511	8-729-216-22	TRANSISTOR	2SA1162	
Q512	8-729-424-59	TRANSISTOR	UN2212	
Q513	8-729-216-22	TRANSISTOR	2SA1162	
Q514	8-729-820-61	TRANSISTOR	2SB1124-T	
Q515	8-729-421-23	TRANSISTOR	XN1216	
Q516	8-729-424-59	TRANSISTOR	UN2212	

ANALOG

Ref. No.	Part No.	Description	Remark
Q517	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q518	8-729-424-93	TRANSISTOR UN2121	
Q519	8-729-424-93	TRANSISTOR UN2121	
Q520	8-729-808-42	TRANSISTOR 2SD1624-T	
Q521	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q522	8-729-808-42	TRANSISTOR 2SD1624-T	
Q523	8-729-420-20	TRANSISTOR XN4312	
Q524	8-729-420-20	TRANSISTOR XN4312	
Q525	8-729-420-20	TRANSISTOR XN4312	
Q526	8-729-424-12	TRANSISTOR UN2112	
Q527	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q528	8-729-420-20	TRANSISTOR XN4312	
Q529	8-729-420-20	TRANSISTOR XN4312	
Q530	8-729-424-59	TRANSISTOR UN2212	
Q531	8-729-424-59	TRANSISTOR UN2212	
Q600	8-729-424-59	TRANSISTOR UN2212	
Q601	8-729-424-12	TRANSISTOR UN2112	
Q700	8-729-012-06	TRANSISTOR XN1601	
Q701	8-729-821-63	TRANSISTOR 2SB1203FAT	
Q800	8-729-012-06	TRANSISTOR XN1601	
Q801	8-729-821-63	TRANSISTOR 2SB1203FAT	
		〈 RESISTOR 〉	
R100	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R103	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R104	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R105	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R122	1-216-031-00	METAL CHIP 180 5% 1/10W	
R123	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R124	1-216-041-00	METAL CHIP 470 5% 1/10W	
R125	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R126	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R127	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R128	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R129	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R130	1-216-041-00	METAL CHIP 470 5% 1/10W	
R131	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R200	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R203	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R204	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R205	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R222	1-216-031-00	METAL CHIP 180 5% 1/10W	
R223	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R224	1-216-041-00	METAL CHIP 470 5% 1/10W	
R225	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R226	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R227	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R228	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R229	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R230	1-216-041-00	METAL CHIP 470 5% 1/10W	
R231	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R300	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R301	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R302	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R303	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R304	1-216-304-11	METAL CHIP 3.3 5% 1/10W	
R305	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R306	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R308	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R310	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R311	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R312	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R313	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R314	1-216-005-00	METAL CHIP 15 5% 1/10W	
R315	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R500	1-216-033-00	METAL CHIP 220 5% 1/10W	
R501	1-216-033-00	METAL CHIP 220 5% 1/10W	
R502	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R503	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R504	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R507	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R508	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R510	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R511	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R512	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R513	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R514	1-216-080-00	METAL CHIP 20K 5% 1/10W	
R515	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R516	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R517	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R518	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R519	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R520	1-218-326-11	METAL GLAZE 470 5% 1/2W	
R521	1-216-304-11	METAL CHIP 3.3 5% 1/10W	
R522	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R523	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R524	1-216-304-11	METAL CHIP 3.3 5% 1/10W	
R525	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R526	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R527	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R528	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R529	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R530	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R531	1-216-001-00	METAL CHIP 10 5% 1/10W	
R532	1-216-001-00	METAL CHIP 10 5% 1/10W	
R533	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R534	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R535	1-216-308-00	METAL CHIP 4.7 5% 1/10W	
R536	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R537	1-216-001-00	METAL CHIP 10 5% 1/10W	
R538	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R539	1-218-231-11	METAL GLAZE 1 10% 1/2W	

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Ref. No.	Part No.	Description				Remark
R540	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R541	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R543	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R544	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R545	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R546	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R547	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R548	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R549	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R550	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R551	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R552	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R553	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R554	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R555	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R556	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R557	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R558	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R559	1-216-066-00	METAL CHIP	5.1K	5%	1/10W	
R560	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R561	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R563	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R600	1-216-033-00	METAL CHIP	220	5%	1/10W	
R601	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R700	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R701	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R702	1-218-326-11	METAL GLAZE	470	5%	1/2W	
R703	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R704	1-216-066-00	METAL CHIP	5.1K	5%	1/10W	
R800	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R801	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R802	1-218-326-11	METAL GLAZE	470	5%	1/2W	
R803	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R804	1-216-054-00	METAL GLAZE	1.6K	5%	1/10W	
R805	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R806	1-216-083-00	METAL CHIP	27K	5%	1/10W	
		〈 NETWORK RESISTOR 〉				
RA100	1-236-428-11	NETWORK, RES 22K				
RA101	1-236-428-11	NETWORK, RES 22K				
RA102	1-236-428-11	NETWORK, RES 22K				
RA200	1-236-428-11	NETWORK, RES 22K				
RA201	1-236-428-11	NETWORK, RES 22K				
RA202	1-236-428-11	NETWORK, RES 22K				
RA300	1-236-428-11	NETWORK, RES 22K				
		〈 RELAY 〉				
RY200	1-515-614-11	RELAY				

Ref. No.	Part No.	Description				Remark
		〈 THERMISTOR 〉				
TH500	1-807-368-11	THERMISTOR PTH59F04BG222TS				
		〈 VARISTOR 〉				
VDR500	1-807-601-11	VARISTOR, CERAMIC				
		〈 VIBRATOR 〉				
X500	1-567-775-11	VIBRATOR, CERAMIC (4.19 MHz)				
**********						
*	1-622-791-11	CB SW BOARD				
		**********				
		〈 SWITCH 〉				
SW102	1-570-503-11	SWITCH, MICRO (CB)				
**********						
*	A-3273-593-A	MOUNTED PCB, DIGITAL				
		**********				
		〈 CAPACITOR 〉				
C1	1-124-584-00	ELECT	100uF	20%	10V	
C2	1-126-154-11	ELECT	47uF	20%	6.3V	
C3	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V	
C4	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C5	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C6	1-124-465-00	ELECT	0.47uF	20%	50V	
C7	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C8	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	
C9	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C10	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C11	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	
C12	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C14	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C15	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V	
C16	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C17	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C18	1-126-162-11	ELECT	3.3uF	20%	50V	
C19	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C20	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C21	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C22	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C23	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C24	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C25	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C26	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C27	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C29	1-124-257-00	ELECT	2.2uF	20%	50V	

DIGITAL

Ref. No.	Part No.	Description			Remark
C30	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C32	1-163-833-00	CERAMIC CHIP	0.068uF		25V
C33	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C36	1-124-465-00	ELECT	0.47uF	20%	50V
C37	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C38	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C39	1-126-154-11	ELECT	47uF	20%	6.3V
C40	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C41	1-126-160-11	ELECT	1uF	20%	50V
C42	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C43	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C44	1-126-157-11	ELECT	10uF	20%	16V
C45	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C46	1-126-157-11	ELECT	10uF	20%	16V
C47	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C48	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C49	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C50	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C51	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C52	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C53	1-124-584-00	ELECT	100uF	20%	10V
C54	1-124-584-00	ELECT	100uF	20%	10V
C55	1-128-285-11	ELECT	330uF	20%	6.3V
C56	1-128-285-11	ELECT	330uF	20%	6.3V
C57	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C58	1-163-110-00	CERAMIC CHIP	51PF	5%	50V
C150	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C151	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C250	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C251	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C350	1-124-234-00	ELECT	22uF	20%	16V
C351	1-124-234-00	ELECT	22uF	20%	16V
C352	1-124-584-00	ELECT	100uF	20%	10V
C353	1-126-157-11	ELECT	10uF	20%	16V
C354	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C355	1-124-234-00	ELECT	22uF	20%	16V
		〈 CONNECTOR 〉			
CNP1	* 1-506-994-11	PIN, CONNECTOR (PC BOARD) 12P			
CNP2	* 1-506-988-11	PIN, CONNECTOR (PC BOARD) 6P			
CNP350	* 1-506-987-11	PIN, CONNECTOR (PC BOARD) 5P			
CNS1	* 1-566-776-11	SOCKET, CONNECTOR 12P			
CNS2	1-562-631-11	SOCKET, CONNECTOR 4P			
CNS3	1-562-630-11	SOCKET, CONNECTOR 8P			
		〈 DIODE 〉			
D1	8-719-404-49	DIODE MA111			
		〈 IC 〉			
IC1	8-752-033-14	IC CXA1081Q			
IC2	8-752-037-50	IC CXA1082BQ			
IC3	8-752-335-92	IC CXD1167Q			
IC4	8-759-981-37	IC MB88505H-1023M			
IC5	8-759-504-68	IC SM5807ES			
IC6	8-759-940-89	IC L272M			
IC350	8-759-710-78	IC NJM082BM			
IC351	8-759-983-79	IC PCM-66P			
		〈 INDUCTOR 〉			
L1	1-410-373-31	INDUCTOR CHIP 2.2uH			
L2	1-410-373-31	INDUCTOR CHIP 2.2uH			
L3	1-410-373-31	INDUCTOR CHIP 2.2uH			
L4	1-410-373-31	INDUCTOR CHIP 2.2uH			
L350	1-410-373-31	INDUCTOR CHIP 2.2uH			
		〈 TRANSISTOR 〉			
Q1	8-729-820-61	TRANSISTOR 2SB1124-T			
Q2	8-729-808-42	TRANSISTOR 2SD1624-T			
Q3	8-729-820-61	TRANSISTOR 2SB1124-T			
Q4	8-729-808-42	TRANSISTOR 2SD1624-T			
Q5	8-729-820-61	TRANSISTOR 2SB1124-T			
Q6	8-729-421-19	TRANSISTOR UN2213			
Q7	8-729-421-19	TRANSISTOR UN2213			
Q8	8-729-424-59	TRANSISTOR UN2212			
Q9	8-729-230-49	TRANSISTOR 2SC2712-YG			
		〈 RESISTOR 〉			
R1	1-216-024-00	METAL GLAZE	91	5%	1/10W
R2	1-218-282-11	METAL GLAZE	22	5%	1/2W
R4	1-216-049-00	METAL CHIP	1K	5%	1/10W
R5	1-216-081-00	METAL CHIP	22K	5%	1/10W
R8	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R11	1-216-073-00	METAL CHIP	10K	5%	1/10W
R12	1-216-097-00	METAL CHIP	100K	5%	1/10W
R13	1-216-074-00	METAL GLAZE	11K	5%	1/10W
R14	1-216-113-00	METAL CHIP	470K	5%	1/10W
R15	1-216-101-00	METAL CHIP	150K	5%	1/10W
R16	1-216-097-00	METAL CHIP	100K	5%	1/10W
R17	1-216-097-00	METAL CHIP	100K	5%	1/10W
R18	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R19	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R26	1-216-109-00	METAL CHIP	330K	5%	1/10W
R27	1-216-093-00	METAL CHIP	68K	5%	1/10W
R28	1-216-099-00	METAL CHIP	120K	5%	1/10W
R29	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R30	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R31	1-216-080-00	METAL CHIP	20K	5%	1/10W
R32	1-216-121-00	METAL CHIP	1M	5%	1/10W
R33	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R34	1-216-097-00	METAL CHIP	100K	5%	1/10W
R35	1-216-073-00	METAL CHIP	10K	5%	1/10W
R36	1-216-097-00	METAL CHIP	100K	5%	1/10W

DIGITAL | DOE | EHS | EJECT | EJECT SW | HOME SW | LED

Ref. No.	Part No.	Description				Remark
R37	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R38	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R39	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R40	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R41	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R42	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R43	1-216-005-00	METAL CHIP	15	5%	1/10W	
R45	1-216-005-00	METAL CHIP	15	5%	1/10W	
R46	1-216-033-00	METAL CHIP	220	5%	1/10W	
R47	1-216-033-00	METAL CHIP	220	5%	1/10W	
R48	1-216-033-00	METAL CHIP	220	5%	1/10W	
R49	1-216-033-00	METAL CHIP	220	5%	1/10W	
R50	1-216-033-00	METAL CHIP	220	5%	1/10W	
R51	1-216-033-00	METAL CHIP	220	5%	1/10W	
R52	1-216-107-00	METAL CHIP	270K	5%	1/10W	
R150	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R250	1-216-121-00	METAL CHIP	1M	5%	1/10W	
		〈 NETWORK RESISTOR 〉				
RA6	1-236-433-11	NETWORK, RES 56K				
RA9	1-236-425-11	NETWORK, RES 12K				
RA20	1-236-428-11	NETWORK, RES 22K				
RA22	1-236-425-11	NETWORK, RES 12K				
RA24	1-236-428-11	NETWORK, RES 22K				
		〈 BARIABLE RESISTOR 〉				
RV1	1-238-601-11	RES, ADJ, CARBON 22K				
RV2	1-238-601-11	RES, ADJ, CARBON 22K				
RV3	1-238-601-11	RES, ADJ, CARBON 22K				
RV4	1-238-601-11	RES, ADJ, CARBON 22K				
RV5	1-238-598-11	RES, ADJ, CARBON 2.2K				
		〈 THERMISTOR 〉				
TH1	1-807-776-11	THERMISTOR ERT-D2FHJ802T				
TH2	1-807-776-11	THERMISTOR ERT-D2FHJ802T				
		〈 VIBRATOR 〉				
X1	1-567-820-11	VIBRATOR, CRYSTAL				
**********						
	* 1-622-794-11	DOE BOARD				
		〈 TRANSISTOR 〉				
Q402	8-729-110-21	TRANSISTOR PH102				
**********						

Ref. No.	Part No.	Description	Remark
	* 1-622-793-11	EHS BOARD	
		*********	
		〈 CONNECTOR 〉	
CNP412	* 1-506-999-11	PIN, CONNECTOR (PC BOARD) 3P	
		〈 TRANSISTOR 〉	
Q403	8-719-906-43	PHOTO INTERRUPTER	GP-1S03
**********			
	* 1-622-796-11	EJECT BOARD	
		**********	
		〈 CONNECTOR 〉	
CNP411	* 1-506-998-11	PIN, CONNECTOR (PC BOARD) 2P	
		〈 SWITCH 〉	
SW101	1-554-813-41	SWITCH, KEY BOARD (EJECT) (▲)	
**********			
	* 1-622-789-11	EJECT SW BOARD	
		**********	
		〈 CONNECTOR 〉	
CNP410	1-506-467-11	CONNECTOR 2P, MALE	
		〈 SWITCH 〉	
SW107	1-570-504-11	SWITCH, MICRO (EJECT)	
**********			
	* 1-617-987-12	HOME SW BOARD	
		**********	
		〈 SWITCH 〉	
SW104	1-570-504-11	SWITCH, MICRO (HOME)	
**********			
	* 1-622-795-11	LED BOARD	
		*********	
		〈 CONNECTOR 〉	
CNP201	* 1-566-001-11	PIN, CONNECTOR (PC BOARD) 4P	
		〈 DIODE 〉	
D401	8-719-812-31	DIODE TLR123	
D402	8-719-812-31	DIODE TLR123	

LED | LOT SW | M1 SW | PS SW | RELAY | REMOTE

Ref.No.	Part No.	Description	Remark
		⟨ RESISTOR ⟩	
R401	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R402	1-216-182-00	METAL GLAZE 220 5% 1/8W	
**********			
*	1-622-787-11	LOT SW BOARD	
		**********	
		⟨ CONNECTOR ⟩	
CNP408	1-506-481-11	CONNECTOR 2P, MALE	
		⟨ SWITCH ⟩	
SW105	1-570-504-11	SWITCH, MICRO (LOT)	
**********			
*	1-622-790-11	M1 SW BOARD	
		**********	
		⟨ SWITCH ⟩	
SW103	1-570-502-11	SWITCH, MICRO (M1)	
**********			
*	1-622-788-11	PS SW BOARD	
		**********	
		⟨ CONNECTOR ⟩	
CNP409	1-506-467-11	CONNECTOR 2P, MALE	
		⟨ SWITCH ⟩	
SW106	1-570-504-11	SWITCH, MICRO (PST)	
**********			
*	1-622-797-11	RELAY BOARD	
		**********	
		⟨ DIODE ⟩	
	8-719-104-34	DIODE 1S2835	
		⟨ CONNECTOR ⟩	
CNJ401	* 1-566-887-11	SOCKET, CONNECTOR 18P	
CNJ402	1-562-719-11	SOCKET, CONNECTOR 10P	
CNP401	* 1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P	
CNP402	* 1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P	
CNP403	* 1-506-984-31	PIN, CONNECTOR (PC BOARD) 2P	
CNP404	* 1-506-985-11	PIN, CONNECTOR (PC BOARD) 3P	
CNP405	* 1-506-985-11	PIN, CONNECTOR (PC BOARD) 3P	
CNP406	* 1-506-988-11	PIN, CONNECTOR (PC BOARD) 6P	

Ref.No.	Part No.	Description	Remark
		⟨ DIODE ⟩	
D403	8-719-104-34	DIODE 1S2836	
D404	8-719-104-34	DIODE 1S2836	
D405	8-719-104-34	DIODE 1S2836	
		⟨ RESISTOR ⟩	
R403	1-216-182-00	METAL GLAZE 220 5% 1/8W	
**********			
		MISCELLANEOUS	
		**********	
314	⚠ 8-848-067-01	PICKUP, OPTICS KSS-160B	
F500	⚠ 1-532-745-11	FUSE 3.15A 125V	
M1	X-3329-571-1	MOTOR ASSY (EJECT/LEVER OUT)	
M2	X-3329-560-1	MOTOR ASSY, M2 (SAVE/LOAD)	
M3	1-541-309-11	MOTOR, L (RF-370C) (ELEVATOR UP/DOWN)	
M902	X-3320-568-1	GEAR ASSY, SLED MOTOR	
Q401	8-729-110-21	TRANSISTOR PH102-L	
S902	1-554-938-11	SWITCH, LEAF	
SW104	1-570-504-11	SWITCH, MICRO (HOME)	
SW105	1-570-504-11	SWITCH, MICRO (LOT)	
SW106	1-570-504-11	SWITCH, MICRO (PST)	
SW107	1-570-504-11	SWITCH, MICRO (EJECT)	
**********			
	1-465-850-11	REMOTE COMMANDER	
		**********	
		⟨ CAPACITOR ⟩	
C900	1-163-033-00	CERAMIC CHIP 0.022uF 50V	
C901	1-163-033-00	CERAMIC CHIP 0.022uF 50V	
C902	1-163-033-00	CERAMIC CHIP 0.022uF 50V	
C903	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C904	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C905	1-163-239-11	CERAMIC CHIP 33PF 5% 50V	
C906	1-163-239-11	CERAMIC CHIP 33PF 5% 50V	
C907	1-163-038-11	CERAMIC CHIP 0.1uF 25V	
C908	1-163-033-11	CERAMIC CHIP 0.022uF 50V	
		⟨ CONNECTOR ⟩	
CNJ900	9-901-617-01	CORD WITH DIN CONNECTOR	
		⟨ DIODE ⟩	
D900	8-719-986-86	DIODE HZK7C	
		⟨ IC ⟩	
IC900	8-759-940-45	IC S-8054HN-CB-S	
IC901		IC uPD75308	

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

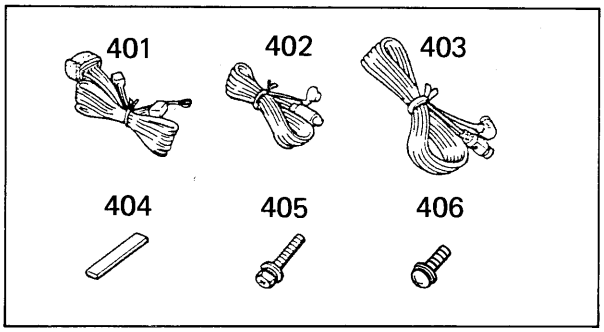
Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

Ref.No.	Part No.	Description			Remark
		〈 COIL 〉			
L900	1-410-196-11	INDUCTOR CHIP 2.2uH 20%			
		〈 LIQUID CRYSTAL DISPLAY 〉			
LCD900	9-901-616-01	LIQUID CRYSTAL DISPLAY LTP4Y1011A			
		〈 PILOT LAMP 〉			
PL900	9-901-612-01	PILOT LAMP (8V 58mA)			
PL901	9-901-613-01	PILOT LAMP (14V 65mA)			
PL902	9-901-613-01	PILOT LAMP (14V 65mA)			
		〈 TRANSISTOR 〉			
Q900	8-729-901-00	TRANSISTOR DTC124EK			
Q901	8-729-807-50	TRANSISTOR 2SD1623-R			
Q902	8-729-807-50	TRANSISTOR 2SD1623-R			
Q903	8-729-807-50	TRANSISTOR 2SD1623-R			
Q904	8-729-901-05	TRANSISTOR DTA124EK			
		〈 RESISTOR 〉			
R900	1-216-033-00	METAL CHIP	220	5%	1/10W
R901	1-216-033-00	METAL CHIP	220	5%	1/10W
R902	1-216-033-00	METAL CHIP	220	5%	1/10W
R903	1-216-073-00	METAL CHIP	10K	5%	1/10W
R904	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R905	1-216-089-00	METAL CHIP	47K	5%	1/10W
R906	1-216-081-00	METAL CHIP	22K	5%	1/10W
R907	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R908	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R909	1-216-089-00	METAL CHIP	47K	5%	1/10W
R911	1-216-121-00	METAL CHIP	1M	5%	1/10W
R915	1-216-081-00	METAL CHIP	22K	5%	1/10W
R916	1-216-081-00	METAL CHIP	22K	5%	1/10W
R917	1-216-081-00	METAL CHIP	22K	5%	1/10W
R918	1-216-081-00	METAL CHIP	22K	5%	1/10W
R919	1-216-081-00	METAL CHIP	22K	5%	1/10W
		〈 SWITCH 〉			
SW900	9-901-614-01	SWITCH, TACTILE (▶■)			
SW901	9-901-614-01	SWITCH, TACTILE (+)			
SW902	9-901-614-01	SWITCH, TACTILE (-)			
SW903	9-901-614-01	SWITCH, TACTILE (RPT)			
SW904	9-901-614-01	SWITCH, TACTILE (PGM)			
SW905	9-901-614-01	SWITCH, TACTILE (▶▶|)			
SW906	9-901-614-01	SWITCH, TACTILE (|◀◀)			
SW905	9-901-614-01	SWITCH, TACTILE (MEM)			
		〈 VIBRATOR 〉			
X900	9-901-615-01	VIBRATOR, CERAMIC (4.19MHz)			

****

Ref.No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	A-4675-162-B	MAGAZINE ASSY	
	X-2114-001-1	HOLDER ASSY, CD BOOKLET	
	1-465-850-11	REMOTE COMMANDER	
402	1-690-136-11	CORD (WITH CONNECTOR) (8P Mini DIN-8P Mini DIN)	
401	1-690-137-11	CORD (WITH CONNECTOR) (POWER SUPPLY HARNESS)	
403	1-690-138-11	CORD(WITH CONNECTOR)(5P DIN-7P Mini DIN	
405	2-116-401-01	SCREW (M5X12)	
*	3-368-229-01	CUSHION (UPPER)	
*	3-368-230-01	CUSHION (LOWER)	
*	3-372-798-01	INDIVIDUAL CARTON	
	3-753-861-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH)	
406	7-628-254-00	SCREW +PS 2.6X5	
404	9-911-815-01	SPOIGE, MAIN BRACKET	

MOUNTING HARDWEAR



Ref. No.	Part No.	Description	Remark

HARDWARE LIST

#1	7-621-255-10	SCREW +P 2X3	
#2	7-621-775-00	SCREW +P 2.6X3	
#4	7-621-770-67	SCREW +B 2.6X6	
#5	7-621-772-40	SCREW +B 2X8	
#6	7-621-770-87	SCREW +BVTT 2.6X5 (S)	
#7	7-621-775-20	SCREW +B 2.6X5	
#8	7-624-102-04	STOP RING 1.5, TYPE -E	
#9	7-624-104-04	STOP RING 2.0, TYPE -E	
#10	7-624-118-01	RING, RETAINING E-2.5	
#11	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
#12	7-628-253-90	SCREW +PS 2.6X4	
#13	7-682-544-04	SCREW +P 3X3	
#14	7-682-546-09	SCREW +B 3X5	
#17	7-685-132-19	SCREW +P 2.6X5 TYPE2 NON-SLIT	
#19	7-621-255-65	+BVTT 2X10 (S)	
#20	7-621-255-25	SCREW +BVTT 2X4 (S)	
#21	7-627-553-37	PRECISION SCREW +P 2X3 TYPE 3	
#22	7-685-102-19	SCREW +P 2X4 TYPE2 NON-SLIT	
#23	7-627-852-17	+P 1.7X4	
#25	7-685-646-79	SCREW +BVTP 3X8 TYPE2 SLIT	
#26	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	
#27	7-682-548-09	SCREW +B 3X8	

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SONY

SERVICE MANUAL

US Model
Canadian Model

SUPPLEMENT-1

File this supplement with the service manual.

Subject: Service parts and parts number of remote commander addition.

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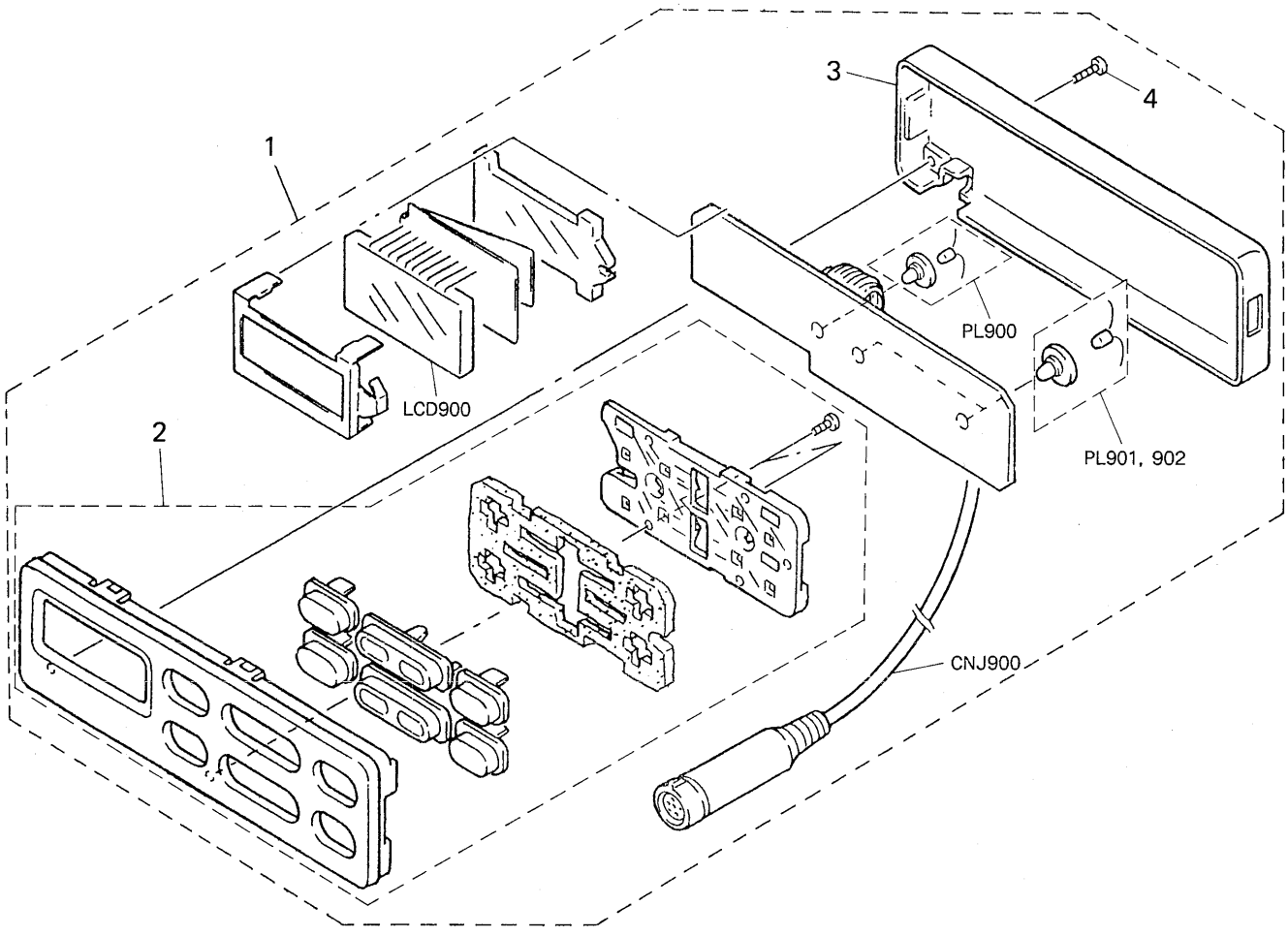
(7) REMOTE COMMANDER UNIT



Ref. No.	Part No.	Description	Remark
1	1-465-850-11	REMOTE COMMANDER	
2	9-901-618-01	CASE ASSY, UPPER	
3	9-901-619-01	CASE, LOWER	
4	9-901-928-01	SCREW, TAPPING	

Ref. No.	Part No.	Description	Remark
CNJ900	9-901-617-01	CORD(WITH CONNECTOR), DIN	
LCD900	9-901-616-01	DISPLAY, LIQUID CRYSTAL	
PL900	9-901-612-01	LAMP, PILOT 8V 58mA	
PL901	9-901-613-01	LAMP, PILOT 14V 65mA	
PL902	9-901-613-01	LAMP, PILOT 14V 65mA	

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Ref. No.	Part No.	Description	Remark
IC901	9-901-927-01	IC uPD75308GF-C05-3B9	

- **Parts number change and addition**

Page	Ref. No.	FORMER		NEW	
		Part No.	Description	Part No.	Description
53 60	11	A-3273-587-A	MOUNTED PCB, ANALOG	* A-3273-588-A	MOUNTED PCB(B), ANALOG
53 63	20	* A-3273-593-A	MOUNTED PCB, DIGITAL	* A-3273-594-A	MOUNTED PCB(B), DIGITAL
60	C300	————	————	1-126-103-11	ELECT 470uF 20% 16V
60	C512	————	————	1-126-103-11	ELECT 470uF 20% 16V
61	CNS300	————	————	1-565-898-11	SOCKET 7P
61	CNS500	————	————	* 1-573-588-11	SOCKET, CONNECTOR 5P
61	CNS502	————	————	* 1-573-955-11	SOCKET, CONNECTOR 18P

9-956-552-81

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SERVICE MANUAL

US Model
Canadian Model

CORRECTION-1

Please correct your service manual.

- There are some errors in the semiconductor locations of the Analog Board and the Digital Board.

☛ : **Corrected portion**

Page 33 ANALOG BOARD

- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
~~D100~~	~~G-7~~	~~Q200~~	~~H-9~~
~~D101~~	~~G-4~~	~~Q201~~	~~G-9~~
D102	H-33	~~Q202~~	~~H-8~~
~~D200~~	~~G-8~~	~~Q203~~	~~G-6~~
~~D201~~	~~G-5~~	~~Q204~~	~~F-5~~
D202	G-33	~~Q205~~	~~G-6~~
D300	G-16	Q206	F-33
D500	C-15	Q300	G-16
D502	E-15	Q301	G-16
D504	E-20	Q302	F-15
D505	C-23	Q303	F-15
D506	G-13	Q304	F-21
D507	G-22	Q305	F-15
D508	D-14	Q307	G-22
D509	F-9	Q308	C-12
D510	F-8	Q309	C-25
D511	E-24	Q310	G-11
D512	E-8	Q311	F-11
D513	D-8	Q500	F-20
D514	E-10	Q502	D-5
D515	C-8	Q503	D-21
D516	C-9	Q504	E-21
D517	C-7	Q505	D-21
D518	C-9	Q506	D-16
D519	F-26	Q507	D-23
D520	E-17	Q508	D-13
D521	D-15	Q509	D-13
D700	E-2	Q510	E-15
D800	D-2	Q511	F-14
		Q512	E-13
IC100	H-10	Q513	F-12
~~IC101~~	~~H-4~~	Q514	E-13
IC102	H-3	Q515	F-13
IC200	H-12	Q516	E-13
~~IC201~~	~~H-6~~	Q517	E-14
IC202	G-3	Q518	E-14
IC300	D-12	Q519	E-14
IC500	F-10	Q520	F-8
IC501	E-5	Q521	F-7
IC502	E-16	Q522	E-11
IC504	B-10	Q523	C-9
IC505	D-27	Q524	B-8
IC506	E-27	Q525	B-8
IC507	D-8	Q526	C-8
IC508	C-5	Q527	C-8
IC600	E-3	Q528	B-9
IC700	D-1	Q529	F-2
IC800	B-2	Q530	D-15
		Q531	G-21
~~Q100~~	~~G-8~~	Q600	F-5
~~Q101~~	~~G-7~~	Q601	F-4
~~Q102~~	~~G-7~~	Q700	E-3
~~Q103~~	~~G-5~~	Q701	D-3
~~Q104~~	~~G-4~~	Q800	D-4
~~Q105~~	~~G-4~~	Q801	C-3
Q106	H-33		

Page 45 DIGITAL BOARD

- **Semiconductor Location**

Ref. No.	Location
D1	G-23
IC1	D-17
IC2	F-17
IC3	F-20
IC4	F-4
IC5	D-5
IC6	F-15
IC350	D-2
IC351	D-4
Q1	C-9
Q2	D-12
Q3	D-12
Q4	E-12
Q5	E-12
Q6	G-20
Q7	G-20
Q8	E-2
Q9	G-23

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